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Department of
Agriculture

LAND AND RESOURCE MANAGEMENT PLAN

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Appendix

TOIYABE
NATIONAL FOREST

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APPENDIX A

APPENDIX A

ISSUE, CONCERN, AND OPPORTUNITY IDENTIFICATION PROCESS

A. Sources

Identification of issues began in the fall of 1979. Past planning and public involvement efforts were reviewed starting with the Multiple Use Plans of the 1960's, the 1980 RPA update, unit plans, RARE II, and the comments resulting from environmental assessments of current projects were also reviewed. Finally, in addition to this information, a list of issues and concerns was requested from Toiyabe personnel. From this information the Forest Interdisciplinary Team prepared a list of 25 preliminary issues and five management concerns. This initial list after review by the Regional Office was mailed to the public for review and comment in November 1979. The Notice of Intent for the planning effort was published in the Federal Register November 4, 1979.

B. Public Involvement

Meetings, mailings, media announcements, and personal contacts by the District Rangers and Staff were used to involve the public between November 20, 1979, and February, 1980.

A briefing guide presenting the initial issues and explaining the process was mailed to 510 interested parties. Briefings were held in Reno, Las Vegas, Austin and Tonopah, Nevada, and in Bridgeport, California. Representatives from the Tahoe, El Dorado, Stanislaus, Plumas, and the Humboldt National Forests and the Lake Tahoe Basin Management Unit participated in the meetings.

The invitation to participate in the process was announced in the Reno, Carson City, and Las Vegas newspapers on November 20-23, 1979. The news release was distributed to all television and radio stations in the Reno and Las Vegas areas. A personal interview was conducted on a local radio station by the Forest Planner just prior to the public meetings. A feature article in the Nevada State Journal covered the open house meetings, reiterating the issues and repeating the invitation for written comments.

Replies were received from 63 respondents collectively commenting on 342 topics.

C. Evaluation Procedures

The public comments expanded and considerably broadened the preliminary issues. All of the proposed management concerns were responded to by the publics and consequently are considered as public issues.

Consolidation of similar comments received yielded 57 new issues in addition to 30 initially proposed.

The 87 issues were evaluated against a screening criteria for Scope, Resolvability, Duration, Intensity, and Consequences. Public comment

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about the criteria resulted in the broadening of the definition for consequences.

Each issue was evaluated against the screening criteria to determine if the issue could be resolved through Forest Planning or should be resolved in some other planning process. Some of the issues required immediate attention and would be handled on a project basis, while other issues were beyond the jurisdiction of the Forest Service. The selected planning issues were then grouped into primary areas by combining similar comments resulting in the development of eleven (11) planning questions. The documentation of the process is found in the Forest planning records.

D. Alternative Formulation

The alternatives considered in the DEIS were developed in responds to both legal requirements and public involvment.

Public Issues and management concerns were considated into a set of general planning questions which guided the subsequent development of alternatives. The Forest Interdisplinary Team then developed a set of compatible management practices to address the planning questions along with appropriate location for appling these management prescriptions. These compatible management prescriptions were then input in the FORPLAN Model as described in Appendix B and nine alternatives were formulated to represent a broad array of choices and displayed in the Draft Envirnoment Statement.

E. Consultation Process

Nevada State Legislation

Briefings have been made to the Legislative subcommittee on public lands on three different occasions dealing with the Revised Roadless Study.

Existing state, local government plans, and available plans for individual private lands were reviewed by the ID Team to assure consistency with the Forest Plan. This review included both California and Nevada. Additionally, copies of the draft EIS and plan are provided to all known planning groups within and adjacent to the Forest and the agencies are asked to review the draft Forest Plan for consistency with their programs.

Interest Groups

The Toiyabe Chapter of the Sierra Club, the Nevada Mining Association, Nevada Wildlife Federation and the Nevada Cattlemens Association have all been contacted at the initial phase of planning, or issue identification phase, the Revised Roadless Review phase, the alternative formulation phase, and review of the draft EIS and draft Plan. These contacts included mailings, special meetings and briefings, and workshops.

The Sierra Timber Products, owners of the sawmill at Gardnerville, were contacted at the issue phase of the plan and placed on the mailing list.

Landowners

Landowners who might be directly affected by the Forest Plan were identified at the beginning of the planning process and notified by letter. Each individual then was placed on the mailing list. No special meetings were identified as necessary, although personal contacts were made with individual landowners on a case by case basis.

After the planning questions were formed, alternatives were initially developed, beginning with a Benchmark analysis. Benchmarks are used to define the limits within which feasible integrated alternatives can be constructed. Benchmarks were designed to respond to the major planning questions and to set the range within which alternatives could be developed. The final step was to develop alternatives that would consider cost efficiency, budget requirements, and address the planning issues.

Consultation With Others

Contacts were made with the Bureau of Indian Affairs at Stewart, Nevada, Inter-Tribal Council of Nevada, Nevada Indian Commission, and with Native Americans living on the Yomba Reservation in Reese River, Nevada, and Woodfords, California.

The contacts included both mailing and personal contacts with objectives of identifying issues of concern. Discussions were initiated with Bureau of Indian Affair's staff to assure compatibility with the Forest Plan alternatives. Proposed alternatives were discussed at these meetings to assure compatibility with Native American programs.

Other Consultations

Two separate briefings were conducted with the Nevada and California State Agencies. The first initiated the planning effort and the second meeting was to discuss the Revised Roadless Study. Continuous contacts have been made with Nevada and California Wildlife Agencies to coordinate the wildlife resources.

F. **Selected Issues, Concerns, Opportunities** - The following are those Issues to be evaluated in the DEIS:

Each public issue was evaluated against the screening criteria to determine if the issue could be resolved in the Forest Plan, on a case-by-case basis through project planning, or was beyond the authority of the Forest Service. The Screening Criteria Workform documents the screening process. The documentation is on file at the Toiyabe National Forest.

Those issues determined suitable for evaluation in the Forest Plan were grouped into eleven planning problems or questions to guide the analysis.

Planning Question 1: How should the various recreation activities on the Forest be allocated to best meet the needs of a variety of recreation visitors?

There is strong public demand for a variety of developed and dispersed recreation activities on the TNF. The TNF has the capability to meet most of the demand for all recreation needs, both summer and winter. One exception is the shortage of suitable "snow-play" areas within a short driving distance of Reno and Las Vegas. In addition, potential conflicts exist between current summer home sites and the need of those sites for public recreation in the future. Summer homes currently occupy some of the most desirable recreation sites on the TNF, including lake frontage at Twin Lakes, Virginia Lakes, and potential day use sites on Mt. Charleston.

Three rivers, the East Fork of the Carson and the East and West forks of the Walker, have been identified as potential Wild, Scenic, or Recreational Rivers by USDI-Park Service. There are no wild, scenic, or recreational rivers on the TNF at this time.

Decisions need to be made on how much and when additional recreation improvement for developed and dispersed activities should be planned. Specific management decisions to minimize conflicting recreation uses also need to be made.

The following issue facets are related to this problem:

Local Issues

9. Archaeology
11. Road construction
13. Developed ski areas
14. Recreation user conflict
21. Summer homes
21. ORV management
34. Additional campgrounds
34. Campgrounds near urban areas
36. Scenic values
38. Wild and scenic rivers

Regional Issues

4. Off Road Vehicle Use (ORV)
9. Developed recreation sites
Concern #4 Ski site development
Concern #5 Recreation user conflicts

Planning Question 2: How should the Forest timber resource be managed for the (a) Sierra Division (b) pinyon-juniper type and (c) Mt. Charleston?

The TNF has three different management situations involving management of the timber resource. The Sierra Nevada supports commercial stands of Jeffrey pine, the true firs, and lodgepole pine, with lesser stands of white pine and mountain hemlock. Logging has been conducted in the Sierra since the Virginia City days. The pinyon-juniper forests are found Forestwide, with the majority of the pinyon-juniper in central Nevada. These woodlands have historically provided firewood, charcoal, and fencing materials. There have been recent efforts by the Nevada Division of Forestry to explore new ways to utilize the pinyon product. Economics is the major problem with development, considering today's prices. The TNF historically sold 6MMBF of timber annually on the Sierra Nevada, primarily from Alpine County and Dog Valley in Sierra County. Both counties are in California.

Mt. Charleston supports both pinyon-juniper and commercial Ponderosa pine. Although some early day logging took place, the timber on Mt. Charleston has not been intensively managed and very little tree harvesting has taken place.

The demand for firewood in the Reno-Carson-South Lake Tahoe and Las Vegas areas will soon exhaust the accessible supply of deadwood. The mixed land ownership patterns and inadequate access further constrain the availability. Predictions based on the price of alternative fuel and the sales of wood stoves indicate the demand for firewood will continue to increase.

Although the above discussion primarily relates to commercial use of the timber, the Forest Service manages the timber resource for diversity of species and age classes as well as for consumptive use of the resource.

The following Issue facets are related to this problem:

Local Issues

3. Firewood availability
24. Timber/wildlife conflicts

45. Integrated pest management
48. Annual timber harvest
49. Timber management effects on other resources.

Regional Issues

2. Timber production
3. Wildlife and timber production
11. Firewood availability

Planning Question 3: (Watershed and Soil Management) - The planning question is of three parts:

a. How should the Forest be managed and/or uses adjusted to maintain the flow of high quality water?

b. How should aquatic and riparian habitats be managed so their quality is maintained or improved?

c. How should the Forest be managed and/or uses adjusted to maintain soil productivity?

The National Forest System lands are the principle source of water necessary for development of many of the lower valleys in Nevada and to a lesser extent eastern California. The major rivers in western Nevada, the Carson and Walker Rivers, originate entirely on Toiyabe National Forest Runoff from the TNF into the Truckee River is significant. Water to support the scattered ranches in central Nevada has its source on the high mountain ranges within the Forest. Water is a scarce resource in eastern California and Nevada.

The acreage of riparian areas is small compared to the total acreage of National Forest System lands. However, these areas provide important habitat for wildlife and fish and are important buffers protecting water quality.

Water needed for National Forest campgrounds, resorts, livestock grazing, and wildlife is obtained through the States and in accordance with State law. Water in the major streams (Truckee, Carson, and Walker) has been appropriated under federal decree and any water necessary for National Forest needs will be in accordance with these decrees and appropriate State laws.

The basic problem is to manage other resource activities in a manner that protects and/or improves existing water quality and soil productivity.

Opportunities to increase water yield through vegetative manipulations are limited. The development and implementation of "best management" practices should resolve most of the problems.

The following Issue facets are related to this problem:

Local Issue

18. Water rights
39. Environmental damage
40. Water quality
41. Soil productivity
42. Riparian area management
70. Instream flow needs

Regional Issue

12. Water yield
28. Water development
Concern #1 Water quality tradeoffs.
Concern #3 Riparian habitats

Planning Question 4: - How should rangelands on Toiyabe National Forest be utilized to meet the needs of livestock, wildlife, wild horses, and other resource uses and values?

Since passage of the Wild and Free Roaming Horse and Burro Act in 1971, we have seen the competition for forage between livestock, wildlife, and wild horses grow. Although the situation on the Forest is not severe at present, we are receiving resource damage in some areas from overgrazing. The Forest has distributed forage for domestic livestock through the Allotment Management Planning Process (AMP). The needs for wildlife and wild horses, although considered at the time the AMP was developed, have changed. Now a general process or policy is needed to guide the distribution of forage for each specific area of land. There are 122 livestock allotments on the Forest with the annual permitted number being 98 M AUMs. Additionally, there are 15 wild horse territories with an estimated 4,300 AUMs of horses and burros grazing jointly on National Forest and National Resource Lands.

Wild horse territories were designated in 1971 and the original territory boundaries have never been revised to reflect changing conditions and/or new information. The Forest has some territories that have been vacant for years, some with declining populations, and others that are stable or on an uptrend. Also, recent studies of individual herds indicate some of the territories were incorrectly mapped in 1971. This plan should revise the location/number of wild horse territories in line with the actual on-the-ground situation.

Current livestock grazing varies from intensive mangement to extensive grazing systems. The Forest Service is directed to review cost effective options to increase livestock outputs while protecting other resource values and uses.

The following Issue facets are related to the planning question:

Local Issues

10. Livestock & wildlife

22. Wildlife/wild horses/livestock
50. Livestock impacts on other resources

Regional Issues

10. Livestock grazing in wilderness

Planning Question 5: - How should the Forest transportation system be planned, managed, and maintained so as to provide access to National Forest System lands and resources?

The increase in mining activity in central Nevada and near Bridgeport, and the Forest's timber management program in the Sierra have been the major reasons for new road construction on the Forest. Road access is an important element in deciding how, where, and when resources are to be managed. There was approximately 90 miles of road constructed in 1981 with an average of 50 miles constructed annually. Most of these roads (90%) are associated with mineral development. The other new roads are associated with timber sales and special use roads for private land access.

The development and use of many resources, including minerals, sawtimber, firewood, developed recreation, and to a lesser degree proper range management, depends upon adequate access. The use of areas, such as wilderness, depends upon reasonable access to trailheads.

Roads are constructed and maintained by a number of federal, state, and local agencies or by individuals under permit. There is a need to coordinate transportation planning with all groups in order to minimize the cost and environmental impacts. Many existing roads on the Forest are inadequate and pose problems from a maintenance and watershed standpoint.

Additional access increases fire risk along with law enforcement problems, but access also aids in the ability to fight fire once it is started.

Roads can have both a positive and negative effect on wildlife (increased harvest, loss of habitat). Roads historically have been a major source of sediment, thus reducing water quality. These effects can be minimized through proper location and design.

The Forest trail system includes a broad range from nationally designated trails such as the Pacific Crest to lesser known trails used for resource management (livestock, wildlife). Much of the trail system of the Forest is in poor condition, needing maintenance and some relocation.

Forest Service buildings are generally old, requiring heavy maintenance, and need to be more energy efficient. Other than those buildings constructed by the Clear Creek Job Corps in the mid to late 1960's, most of the facilities are 30 to 40 years old.

A systematic construction/maintenance program is needed to bring the Forest roads, trails, and buildings up to a maintainable, safe standard.

Issue facets related to the problem:

Local Issues

11. Road Contstruction
19. Access rights-of-way
20. Trail needs
54. Establish additional F.S. administrative sites

Regional Issues

50. Road development

Planning Question 6: (Lands - There are three parts to the planning question):

1. To what extent should the Forest acquire new lands into the National Forest System and where?

2. What utility corridors, substation sites, and electronic sites are needed and where?

3. What public access (rights-of-way) are needed and where? Access should be provided through private lands where there is a public need.

The Forest has an on-going land exchange program designed to block up ownership and to acquire lands key to the management of National Forest resources. The program has primarily been in the Sierra Nevada and Mt. Charleston areas and the principle method has been through the land exchange program. The Toiyabe has only a limited acreage of land classified for exchange and the majority of land exchanges have involved public lands administrated by the Bureau of Land Management.

The Forest's land exchange program has been averaging 300-400 acres per year and the land acquisition program under the Nevada Receipts Act provides $10,000 for land acquisition on an annual basis. In addition, the Forest has acquired the Redfield properties (approximately 30,000 acres) and Poore Lake (685 acres) since 1978. Both Redfield acquisitions were through a special legislative act, providing for land in lieu of the estate taxes.

Public access to the Forest is limited in some areas and the problem is expected to increase as populations increase and traditional land uses change.

Growth in Nevada and in the West has brought on increasing demands for power. Additional power generating plants are planned for Nevada and other areas of the West that will require the construction of power transmission lines through Nevada. The same situation occurs with the need for electronic sites.

The development of inholdings directly adjacent to and within the National Forest has resulted in an increasing demand for the use of National Forest lands for support services such as water, power, and roads.

All non-Federal lands within the National Forest boundary could be added to the National Forest System. The Truckee River is presently committed to various utility uses ranging from highways, railroads, water transmission, and power lines.

The following Issue facets are related to the problem:

Local Issues	Regional Issues
1. Land acquisition	Concern #2 - Coordinating energy facilities
4. Urban encroachment	
16. Growth in central Nevada	

21. Summer homes
57. Utility corridors
58. Electronic sites

Planning question 7: How should the Forest be utilized to satisfy National needs for mineral and energy resources where other resource opportunities would be foregone?

Mining boomed during the late 1970's and early 1980's, slacked off during the 1982-83 recession, and started to pick up again in late 1983 and 1984. Exploration is starting to increase in areas with significant resource conflicts. Such as:

Roadless Areas.
Areas with outstanding scenic values.
Important fishing streams and key wildlife habitats.
Areas of significant cultural resources.

The problem for the TNF is to respond to the operating plans being submitted in the required time frames, prescribed by the mining regulations designed to protect surface values (e.g. National Environmental Policy Act of 1969, cultural management regulations). Gold and silver mines are being re-opened along with new discoveries of barite in central Nevada. Oil, gas, and geothermal leasing are active in central Nevada and on Mt. Charleston. It is expected the Nation's need for minerals will continue to increase along with the potential for environmental damage.

The following Issue facets are related to the problem:

Local Issues	Regional Issues
9. Mining/Archeological conflicts	1. Mineral and energy development.
20. Minerals and energy	

Planning Question 8: Should the Forest Recommend Wilderness designation for any of the areas inventoried under the Revised Study? If so, which one(s)?

The 1984, California Wilderness Act (CWA) designated two additional wildernesses on TNF, the Carson-Iceberg Wilderness (Toiyabe and Stanislaus N.F.) and an additional acreage to the existing Mokelumne Wilderness, (Toiyabe, Eldorado, and Stanislaus N.F.). The CWA also designated further planning for the Hoover Planning Area (49.2m acres) and Carson-Iceberg Planning Area (6035 acres) requiring a recommendation be filed with the Congress within three years of the Act. The CWA also continued the RARE II Further Planning Status of the Hoover Further Planning Area (East) and the Sweetwater Mountains. The remaining roadless areas were released from further evaluation until the next planning period.

In Nevada, the Revised Roadless Area Inventory identified 54 roadless areas suitable for evaluation as wilderness.

In summary, there are 4 roadless areas in California and 54 Nevada Roadless Areas or a total of 1,988,500 acres to be evaluated for wilderness.

Resolution of the problem requires identification of areas suitable and desireable for inclusion in the National Wilderness System and identification of appropriate non-wilderness management in those areas not identified as recommended wildernesses at this time.

Coordination with other Federal agencies, particularly the BLM, and adjacent National Forests, is necessary for resolution of this Issue.

Issue facets related to this problem are:

Local Issues	Regional Issues
5. Wilderness (RARE II)	
8. Wilderness study other than RARE II	

Planning question 9 - How should Toiyabe National Forest be managed to maintain and improve wildlife and fish habitats?

The TNF has a variety of game and non-game wildlife species common to the Great Basin. Of particular interest are the Paiute and Lahontan Cutthroat trout, both on the threatened list as published by the U.S. Fish and Wildlife Service (USDI). Other species of interest to the general public are the desert bighorn sheep in central Nevada; elk, recently introduced in the Monitor Range; and the Palmers chipmunk on Mount Charleston. Two endangered species of the USDI list, the bald eagle and the Peregrine falcon, are visitors to the Forest. The Sierra Nevada has a wealth of suitable fishing waters, both streams and high mountain lakes. The California Department of Fish and Game in cooperation with the Forest Service has developed programs to reestablish the Paiute and Lahontan trout in Alpine and Mono Counties. Fish stocking programs by both Nevada and California occur annually throughout the Forest.

There are numerous opportunities for habitat improvement. Examples are pinyon-juniper thinning and prescribed burning in both pinyon-juniper and sagebrush types to improve vegetation diversity. The TNF has accomplished a number of habitat improvements over the last 10 years. There are opportunities to utilize other resource activities like timber and grazing management to improve wildlife habitat.

NFMA requires the Forest Service to maintain viable populations of wildlife and to maintain vegetative diversity. Timber management activities and other vegetation will be manipulated in ways to maintain/improve diversity.

The following Issue facets are related to the problem:

Local Issues	Regional Issues
10. Livestock & wildlife	
22. Wildlife/wild horses & livestock	
24. Timber/wildlife	
26. Endangered & threatened species	
29. Wildlife indicator species	
64. Fisheries values	
68. Vegetative diversity	
69. Wildlife research	

Planning question 10: How should Toiyabe National Forest respond to the impacts from urban encroachment into the Forest along the Reno-Carson Front and general population increases in central Nevada?

Rapid growth in the Reno-Carson area has resulted in extensive housing developments proposed for private land adjacent to and within the Forest. Many of these developments require road access across steep, sensitive mountain slopes. If roads are constructed, there is a potential for severe environmental impacts. Additional problems related to this growth include possible adverse effects on wildlife, scenics, air and water quality, a reduction in the quality of the recreation experience, and the increased cost of fire protection. Mining has the potential of greatly increasing the population in central and eastern Nevada. This projection, along with the recent increase in mining, will bring in a work force that has a high disposable income and sufficient free time for recreation. As these people settle, there will be an increasing demand on the Forest for recreation, firewood, and other resources.

With accelerated growth, law enforcement problems and vandalism are increasing and key wildlife habitat is being lost. Coordination and cooperation with state, county, and local government is essential if impacts are to be minimized.

The following Issue facets are related to this problem:

Local Issues	Regional Issues
4. Urban encroachment	
16. Growth in central Nevada	

Planning question 11 - What additional areas on Toiyabe National Forest should be classified as Research Natural Areas?

The research natural area is a USDA designation that recognizes the importance of setting aside certain areas for research and educational purposes. Nationally, there has been an effort to identify areas that represent various ecosystems and are essentially free from man's impact. Wilderness, although providing similar opportunities, requires research activities to be compatible with the Wilderness Act. The Forest presently has the following RNA's: Mt. Jefferson, Carpenter Canyon, and Sweetwater. Babbitt Peak, west of Dog Valley, has been recommended for Research Natural Area Classification.

The interest of the research national area system is to identify sufficient representation of the various botanic, aquatic, and geological types to complete the national network of research natural areas.

Issue facet related to the problem:

Local Issues	Regional Issues
23. Research natural areas	

APPENDIX B

INTRODUCTION

PLANNING PROBLEM

A primary responsibility of the Forest Service is to decide how best to manage National Forest lands to produce the goods and services the public desires. These lands must be managed to provide adequate levels of resources and services for both current and future uses.

The Toiyabe National Forest consists of 3,171,705 acres of three distinct divisions (the Sierra Nevada, Central Nevada, and Mt. Charleston) each with different resource capabilities, issues and management concerns, and different uses. These uses vary from commodities with market values such as timber, fuelwood, water, developed recreation, and grazing; to non-commodities such as dispersed recreation, wildlife, and wilderness.

Land and resource management planning is required on all National Forests by the Forest and Rangeland Resource Planning Act (RPA) of 1974, and as amended by the National Forest Management Act (NFMA) of 1976. Planning under NFMA responds to the increasing complexity and social significance of the Forest and the magnitude of the analysis and management decisions. The regulations (36 CFR 219) developed to comply with NFMA provide the analytical framework needed to make such decisions., The NFMA Act and regulations also state that the requirements of the National Environmental Policy Act (NEPA) and its regulations (40 CFR 1500-1508) must be applied in this analysis process. The NEPA Regulations require that the environmental effects of a proposed action and alternatives to that proposed action must be disclosed in an Environmental Impact Statement (EIS).

The planning and environmental analysis process brings a new outlook and a new technology to National Forest land management, principally: (1) processes formerly used to make individual resource decisions are now combined to help make integrated managment decisions, and (2) new mathematical modeling techniques are used to assist in the land allocation problem including identifying the most cost-efficient pattern of land management.

PLANNING PROCESS

The NFMA regulations describes a 10-step process (36 CFR 219.12) to be used by National Forests in their planning effort. These steps are:

1. Identification of Public Issues, Management Concerns, Resource Use and Development Opportunities,
2. Development of Planning Criteria,
3. Inventory Data and Information Collection,
4. Analysis of the Management Situation,
5. Formulation of Alternatives,
6. Estimated Effects of Alternatives,
7. Evaluation of Alternatives,
8. Preferred Alternative Recommendation,
9. Plan Approval (Plan Implementation),and
10. Monitoring and Evaluation.

Appendix B describes and explains the analytical phase of the process, or steps 3, 4, 5, and 6. The judgmental phase, steps 1, 2, 7, and 8, is described in Chapters I, II, and in Appendix A. The execution phase, steps 9 and 10, is displayed in the Forest Plan.

1. Identification of Purpose and Need. Through public participation, including contacts with other Federal agencies, and State and local governments, the Forest interdisciplinary team identified public issues, management concerns, and resource opportunities (ICO's). The Forest Supervisor then identified the major ICO's to be addressed in the planning process.

2. Development of Planning Criteria. The Forest Management Team developed criteria based on the identified ICOs to direct the collection and use of inventory data, the analysis of the management situation, and the design, formulation, and evaluation of alternatives.

3. Inventory Data and Information Collection. National Forests collect, maintain, and update data necessary for planning and managing the resources under their jurisdiction. The interdisciplinary team, comprised of specialists from different resource areas, used appropriate existing data whenever possible to address the issues and concerns. This was supplemented by new data and professional judgement to help resolve sensitive issues and management concerns. Data, including resource capabiltiy areas and acreages, supply and demand, and the expected outputs, values and costs from management prescriptions, are needed to develop the integrated resource model (FORPLAN) used in the analysis of the management situation, formulation of alternatives, and estimated effects of the alternatives. Data is on file at the Forest Supervisor's Office.

4. Analysis of the Management Situation. The Analysis of the Management Situation (AMS) is the detemination of the Forest's capability to supply goods and services to meet society's demands. This step provides the basis for formulating a wide range of alternatives, while remaining within the resource boundries constructed through this supply analysis. The FORPLAN linear programming model was used to determine these boundries, in addition to meeting several specific requirements. The requirements include, (1) determining the maximum present net value (PNV) the Forest can generate using market values, (2) determining the maximum PNV the Forest can generate using market and assigned values, (3) projecting the current management program, (4) evaluating the feasiblity of meeting national production goals as expressed by the Resource Planning Act (RPA) targets, (5) determining the PNV with maximum Wilderness, (6) determining the PNV with minimum Wilderness, (7) displaying the minimum costs necessary to retain the lands in the Nationl Forest System, (8) determining the maximum timber production, and (9) determining the maximum range production. The AMS document (with revisions) is on file in the Supervisor's Office.

5. Formulation of Alternatives. The information gathered during the first four planning steps is combined and analyzed to formulate alternative management plans. The alternatives reflect a range of resource management direction, and each major public issue and management concern was addressed in one or more of the alternatives. The programs formulated represent the most cost-effecient way of attaining the objective set forth in each alternative. Both priced and nonpriced outputs were considered when developing the alternatives. The following lists the type of alternatives considered:

(a) the current (no action and current budget) program which projects the current level of goods and services to be provided in the future,
(b) the emphasis on market outputs that produce an income for the government,
(c) the emphasis on nonmarket outputs and amenity values.
(d) the outputs and program emphasis which responds to the Forests portion of the 1980 RPA program,
(e) the constrained budget emphasizes outputs at a constrained 1982 budget level minus 25 percent and straightlined across the planning horizon,
(f) the emphasis on high productivity responding to the 1985 alternative 9, and
(g) the other alternatives emphasize some combination market and/or nonmarket output production.

6. Estimation of Effects of Alternatives. The physical, biological, social and economic effects of each alternative were estimated and analyzed to determine how the alternative meets the various goals and objectives, how the alternative responds to the public issues and management concerns, and how each alternative compares to the other alternatives. The output levels, benefits and costs were generated both through the FORPLAN model, and by analysis outside FORPLAN. The estimation of alternative effects included: (a) direct effects, (b) indirect effects, (c) conflict with other Federal and State land use plans, (d) other environmental effects, (e) energy requirements and conservation potential, (f) natural or depletable resource requirements and conservation potential, (g) historic and cultural resources, and (h) means of mitigation.

7. Evaluation of Alternatives. Using the previously selected planning criteria, the Interdisciplinary Team analyzed the significant physical, biological, economic, and social effects of each of the 9 alternatives considered in detail. The analysis included present net value, social and economic effects, outputs of goods and services, and systematically documented each step of the process.

8. Preferred Alternative Recommendation. Using the analysis described in step 7, the Forest Supervisor recommended a preferred alternative to the Regional Forester. The preferred alternative is identified in Chapter II of this draft Environmental Impact Statement (DEIS), and is displayed as the proposed plan in the accompanying Forest Plan.

9. Plan Approval. After the issuance of the Final Environmental Impact Statement/Forest Plan (FEIS/Plan), the Regional Forester will review the FEIS/Plan and will either approve or disapprove it in accordance with 36 CFR 219.10(c). If the Plan is approved, a Record of Decision (ROD) will be issued according to NEPA requirements, (40 CFR 1505.2). In addition to the NEPA requirements, the ROD will include a summary comparing the selected alternative with (1) any environmentally preferred alternatives, and (2) any other alternative with a higher present net value.

10. Monitoring and Implementation. A Monitoring Plan is included in Chapter V of the Forest Plan. It includes the actions, effects, or resources to be monitored; the frequency of measurement; the expected precision and reliability of the monitoring process; the monitoring schedule; and the

allowed variation limits. Implementation will be evaluated at intervals established by the Monitoring Plan to determine how well Plan objectives are being met, and how closely management standards and guidelines are being followed. Based on this evaluation, the interdisciplinary team may recommend to the Forest Supervisor changes in management direction, revisions and amendments to the Forest Plan.

INVENTORY DATA FOR INFORMATION COLLECTION

INTRODUCTION

The Toiyabe National Forest interdisciplinary team began the inventory phase by: (1) analyzing National Forest Management Act (NFMA) regulations to determine the "required" inventory items and (2) analyzing public issues and management concerns to determine if additional inventory items were needed to respond effectively to issues. A total "inventory needs" list was compiled based on this analysis. Responsibility for collecting and assembling the needed inventory was assigned to appropriate Staff, Staff specialists and ID Team members. Individuals with assigned inventory collection tasks were instructed to utilize existing inventories where possible.

CAPABILITY AREA INVENTORY

The first part of the inventory was to determine capability areas. Capability areas are defined as:

> Discrete and recognizable units of land or water classified according to the physical, biological, vegetative, and administrative condition of the area3 units. They are homogeneous in their ability to produce yields and their production limitations.

Timber Strata

On the Toiyabe, the starting point for capability area delineation began with the compartment and stand examination data and maps. On the maps, each stand type, called strata, were designated by a code number. From this information acreage amounts were established by strata. The strata were then aggregated in broader groupings and mapped. These new strata were:

Jeffrey Pine - seeds/saps
Jeffrey Pine - immature
Jeffrey Pine - mature
Lodgepole Pine - seeds/saps
Lodgepole Pine - immature
Lodgepole Pine - mature
Mixed Conifer - seeds/saps
Mixed Conifer - immature
Mixed Conifer - mature
Non-commercial

Slope

Slope was another capability area delineation that was mapped and overlayed for commercial forest land on the strata map. The slope of the land has an effect on the type of timber harvesting method used, and therefore, harvest costs. On the maps and in FORPLAN, the land base was broken into areas less than 30 percent slope, or areas greater than 30 percent slope. Aerial logging would be applied to those areas greater than 30 percent slope, and tractor logging to areas less than 30 percent slope. When defining what slope a particular strata had, the assumption was that if the majority of the strata (stand) fell in the greater than 30 percent category, the whole stand was considered that. The same was true for the less than 30 percent category.

Many timber stands occur on a variety of soils developed from granitic parent materials with slope gradients varying from 8 to over 50 percent. Most of these stands do not occur as large continuous areas. They are scattered and in pockets generally oriented on northerly exposures or in areas where there is an accumulation of moisture, i.e. near riparian areas, snow accumulation areas, drainage ways etc.

Soils developed from granitic parent materials are highly susceptible to both wind and water erosion. Likewise, these soils tend to have high infiltration rates and high permeability. However, due to organic matter accumulation, and very fine sand or silt size particles in the soil matrix, many of these soils show hydrophobic characteristics, i.e., water repellency chararcteristics. Many of the soils developed from other volcanic, sedimentry or metamorphic parent materials also show some evidence of hydrophobicity. Hydrophobic characteristics affect infiltration and permeability thus leading to water accumulation at or near the soil surface, thereby providing an opportunity for overland flow, and accelerated surface erosion.

Since these granitic soils are quite erosive, Tolerance Limits, i.e., the limit of soil loss relative to the soils natural ability to replace this loss; becomes an extremely important factor in maintaining site productivity. As an example, soils less than 20 inches deep have a Tolerance limit of one Ton/Ac/Yr which is approximately one cubic yard/acre soil loss per year. Deeper soils have greater Tolerance limits, due primarily to the depth of soil material to be drawn from. Any significant disturbance, i.e., roads, skid trails, falling trees, etc., can promote soil loss in excess of Tolerance limits. Many of our shallow granitic soils on slopes above 35 percent are estimated to be at or above Tolerance Limits under the present vegetative canopy of trees. On granitic's, any slope above 35% has a severe erosion hazard rating.

Special mitigating practices can be used under specific circumstances to avoid exceeding Tolerance Limits but these should be analyzed carefully for applicability. Such practices include well designed skid trails on the contour, use of natural topography for skid trails, falling trees relative to natural topography, etc. (all are designed for less disturbance, better water control and better soil protection after harvest.)

Utilizing the above rationale, the Soil Scientist reviewed each timber stand, as stratified in the timber maps. He then compared this to the soils inventory data to make a determination of:

1. Present erosion - what erosion is currently taking place expressed, in tons/acre/year.

2. Tolerance Limit for Soils as established by the Universal Soil Loss Equation.

This work was expressed as an equation and placed on each timber polygon on the timber maps.

Where: $$TX = \frac{\text{Actual erosion taking place}}{\text{Permissible Soil Loss in tons/acre/year}}$$

X = % of the dominant soil type in the polygon

Once the equation was placed on each polygon by the Soil Scientist, The Timber Staff reviewed the maps to determine what areas should be classified as physically unsuitable. Those areas identified were treated as follows:

> Area with ratio of 1/1 or where existing conditions exceed tolerance levels were considered physically unsuited for Timber management unless in the judgement of the timber staff special logging systems and silvicultural treatment would permit management and maintain soil/water threshold limits.

The specific maps and working papers documenting the above process are listed among the planning records. For modeling purposes in FORPLAN a breakpoint was needed in slope classification. The actual breakpoint to meet the above soil protection requirments is a range from 30 to 40% slopes. The implementation of where tractor logging is permitted will be handled by site specific environmental analysis. Standards and guidelines section covers the site specific implementation of this range of slopes where tractor logging will be permitted.

Visual Class

Another consideration in capability area delineation of commercial forest land was visual classes. Timber stands were further broken into retention and non-retention areas. If a stand was labelled retention, then modified timber practices would be used to preserve the visual quality of the area. These retention and non-retention areas were also mapped.

Roads

The roading system within the strata (stands) has an effect on the cost of a timber harvesting operation. Timber stands were designated roaded, or non-roaded based on the density of roads in a given area. If an area, such as the Carson Front, had a low density of roads, the timber stands that fell within it were classed as non-roaded. These non-roaded areas were given higher roading costs within FORPLAN.

Remaining Capability Areas

An additional capability unit stratification was needed for those areas that fell into the non-commercial category in the Sierra Nevada portion of the Forest, and for those areas in the Central Nevada portion of the Forest. These areas were further broken down into suitable and unsuitable lands for livestock grazing. Using this information and existing range inventory data, they were then broken out by individual range allotments.

In the Mt. Charleston portion of the Forest, capability areas were defined by Recreation Opportunity Spectrum (ROS) class.

ANALYSIS AREAS

All like capability areas were grouped into analysis areas. In the Sierras, for example, capability areas that are Jeffrey Pine, immature, non-retention, < 30 percent - roaded were combined into one analysis area. This was accomplished by overlaying the slope, and retention and non-retention maps onto the timber strata maps. Each analysis area was mapped with the acreage calculated, and assigned a unique code number. These analysis areas were composed of noncontiguous timbered lands located in the Sierra Nevada.

An additional layer was added to the Sierra portion of the Forest in order to incorporate some type of contiguous boundary for which one can better coordinate the allocation and/or scheduling of management prescriptions to analysis areas. These areas were input as coordinated allocation zones (CAZ's) in the Version II FORPLAN model. Incorporating CAZ's into the FORPLAN model in this manner also allows representation of yield and cost information that is a function of the juxtaposition of management prescriptions over a broad area. An example of a CAZ would be the Dog Valley area of the Toiyabe National Forest.

On the Forest, a second type of analysis area existed for rangelands. Rangelands were divided into contiguous, or non-contiguous analysis areas by range allotment boundries. Data from Range strata inventories were summarized by allotment, and the allotments then became the analysis areas. These analysis areas occur throughout the Sierra Nevada, and Central Nevada portions of the Forest.

An example of these types of analysis areas would be: the Table Mountain C&H range allotment with 27,548 acres of land suitable for livestock grazing, and 13,132 acres of land unsuitable for livestock grazing.

A third type of analysis area was derrived for the Mt. Charleston portion of the Forest utilizing the ROS capability areas. This resulted in two analysis areas: the backcountry analysis area and the developed sector analysis area.

Due to the roadless area reevaluation, those areas of the Forest qualifying as roadless had to be incorporated into the FORPLAN model in order to adequately address and respond to the Wilderness issue. This allows the FORPLAN model to consider these areas for Wilderness management, in addition to the wide variety of non-wilderness management prescriptions that were already being considered, before the roadless area reevaluation issue came about. This created a new layer or set of boundaries which had to be recognized, and therefore, increased the number of analysis areas in the Central Nevada and Mt. Charleston portion of the Forest.

In Central Nevada, this required identifying and subsequently combining that portion of each individual range allotment that fell into each roadless area. This also resulted in the identification of that portion of each individual range allotment that is considered as roaded. In Mt. Charleston, this required identifying and combining that portion of each ROS class that fell into each roadless area and identifying that portion of each individual ROS class that is considered as roaded.

The recognition of this new layer or set of boundaries in the Sierra Nevada portion of the Forest was incorporated into the FORPLAN model as additional CAZ's.

The final total for analysis areas on the Toiyabe National Forest is 258. In the Sierras, there are 35 zones which contain 170 of these analysis areas.

PRODUCTION COEFFICIENTS

The following Table (TABLE B-1) displays activities and outputs used in FORPLAN.

TABLE B-1 Activities and Outputs in FORPLAN

Activities:

MIH		
901	Dispersed Operations & Management (O&M)	Dollars/acre/year
901A	Cultural Resource Program	Dollars/acre/year
902	Developed Site O&M	PAOT Days/area/year
966	Developed Site Improvement	PAOT/area/period
903	Dispersed Investment	Dollars/area/period
905	Wilderness O&M	Dollars/acre/year
906	Wilderness Investment	Dollars/acre/year
933	Non-energy Mineral Management (Mgt.)	Dollars/area/year
933A	Energy Minerals Mgt.	Dollars/area/year
934	Mineral Land Rehabilitation	Dollars/area/year
947	Land Management Planning	Dollars/area/year
948	Land Ownership Mgt.	Dollars/area/year
907	Wildlife O&M	Dollars/area/year
908	Wildlife Improvement	Acres/area/year
909	Wildlife Improvement	Dollars/area/year
915	Range O&M	Dollars/acre/year
918	Range Improvement	Dollars/acre/year
D07	Wild Horse and Burro Mgt.	Dollars/acre/year
922	Reforestation (Backlog)	Acres/area/year
924	Stand Improvement (Backlog)	Acres/area/year
E03	Silvicultural Exam & Prescription	Dollars/area/year
E03A	Silvicultural Exam - Pinyon Juniper	Dollars/area/year
E04	Reforestation	Dollars per acre harvested/period
E05	Timber Stand Improvement	Dollars per acre harvested/period
E02	Sawlog Sale Cost	Dollars per acre harvested/period
HAUL	Haul Costs	Dollars per acre harvested/period
P11	Treatment of Active Fuels	Dollars per acre harvested/period
P24	Law Enforcement	Dollars/area/year
P24A	Special Agent	Dollars/area/year
E00	Timber Plan & Inventory	Dollars/area/year
E07	Sale Administration - Old Sales	Dollars/area/year
04E	Reforestation Existing Knutson-Vanderberg (KV)	Acres/area/year
05E	Timber Stand Improvement Existing KV	Acres/area/year
11P	Fuel Treatment Existing	Acres/area/year
067E	Fuelwood Preparation & Administration	Dollars/area/year
P345	Insect & Disease Mgt.	Dollars/area/year

MIH		
308	Cultural Inventory	Dollars/area/year
E067	Timber Sale Preparation & Administration	Dollars per acre harvested/period
925	Pinyon Pine Nuts	Dollars/area/year
926	Christmas Trees	Dollars/area/year
927	Post & Poles	Dollars/area/year
928	Pinyon Fuelwood	Dollars/area/year
929	Soil & Water Mgt.	Dollars/area/year
950	Soil & Water Improvement	Dollars/area/year
940	Fire O&M	Dollars/area/year
940A	Fire Mgt. - Coop	Dollars/area/year
945	Fuel Mgt.	Acres/area/year
L10	Local Road Preconstruction	Dollars per acre harvested/period
L01	System Planning	Dollars per acre harvested/period
L14	Timber Purchaser Road Construction	Dollars per acre harvested/period
L19	Road Maintenance	Dollars per acre harvested/period
L02	Arterial/Collector Preconstruction	Dollars per acre harvested/period
J06	Land Line Location	Dollars per acre harvested/period
L03	Arterial/Collector Road Construction Engineering	Dollars per acre harvested/period
L04	Arterial/Collector Road Construction	Dollars per acre harvested/period
L05	Arterial/Collector Reconstruction	Dollars per acre harvested/period
L11	Local Road Construction Engineering	Dollars per acre harvested/period
L29	Timber Purchaser Road Reconstruction	Dollars per acre harvested/period
L25	FA & O Facility Maintanence	Dollars/acre/year
L24	FA & O Construction/ Reconstruction	Dollars/acre/year
WCF	Working Capital Fund (WCF)	Dollars/acre/year
935A	Human Resource Programs	Person Years/area/year
935B	Human Resource Program Operation	Dollars/area/year
960	General Administration	Dollars/area/year
944	Law Enforcement-Coop	Dollars/area/year

Outputs:

MIH		
W01	Public Developed Site Use	Thousand Rec Visitor Days/area/year
W04	Private Developed Site Use	Thousand Rec Visitor Days/area/year
W07	Dispersed Recreation Use	Recreation Visitor Day/acre/year
W08	Dispersed Use Hunting	Wildlife-Fish User Day/acre/year
W09	Dispersed Use Fishing	Wildlife-Fish User Day/acre/year
W16	Wilderness Use	Recreation Visitor Day/acre/year
W17	Wilderness Use Hunting	Wildlife-Fish User Day/acre/year
W18	Wilderness Use Fishing	Wildlife-Fish User Day/acre/year
PLAN	Mineral Operating Plans	Number of plans/area/year
LEAS	Energy Leases	Number of leases/area/year

MIH		
NON1	Non-Energy Leases	Number of leases/area/year
DIST	Acres Disturbed	Number of acres/area/year
RECL	Acres Reclaimed	Number of acres/area/year
X06	Property Boundary	Miles/area/year
V01	WFUD Increase by Improvement	Wildlife-Fish User Days/area/year
MIS	Wildlife Management Indicator Species	Animal numbers/area/year
W66	Grazing Capacity	Animal Unit Month/acre/year
W71	Permitted Use	Animal Unit Month/acre/year
W73	Wild Horse-Burros	Animal Unit Month/acre/year
W64J	Jeffrey Pine Sawtimber	Thousand Cubic Feet/acre/period
W64M	Mixed Conifer Sawtimber	Thousand Cubic Feet/acre/period
W64L	Lodgepole Pine Sawtimber	Thousand Cubic Feet/acre/period
X08	Softwood Roundwood	Thousand Cubic Feet/area/year
CORD	Firewood from Precom Thins	Cords/area/period
INV	Timber Inventory	Thousand Cubic Feet/acre/year
SAV	Stand Average Volume	Thousand Cubic Feet/acre/year
GRO	Timber Growth	Thousand Cubic Feet/acre/year
LTSY	Long Term Sustained Yield	Thousand Cubic Feet/acre/year
BE1	Pinyon Pine Nuts	Pounds/area/year
BE2	Christmas Trees	Each/area/year
BE3	Post and Poles	Each/area/year
BE4	Pinyon fuelwood	Thousand Cubic Feet/area/year
431	Pinyon/Juniper Stand Exams	Acres/area/year
P35	Insect & Disease Treatment	Acres/area/year
432	Timber Stand Exams	Acres/area/year
Y77	Water yield-State Standards	Thousand Acre Feet/area/year
Y87	Maintain Watershed Condition	Acres/area/period
Y76	Water Quality Improvement	Thousand Acre Feet/area/year
Y75	Sediment Reduction	Thousand Tons/area/year
Y86	Improved Watershed Condition	Acres/area/year
Y80	Human Caused Fires	Numbers/area/year
X80	Water Yield Increase due to Harvesting	Acre feet/acre/year

AREAS TENTATIVELY SUITABLE FOR MANAGEMENT PRACTICES

Determination of suitability is the process of ascertaining, "The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices."

Range

Determination of land available, capable and suitable for range production follows instructions in U.S. Forest Service, Intermountain Region, Range Analysis Handbook (FSH 2209.21). Determination on lands lacking range analysis (25 percent of the Forest acreage) was accomplished by extrapolation or estimate.

Suitable range is land accessible or made accessible to livestock, which produces forage or has inherent forage producing capabilities, and can be grazed on a sustained yield basis under reasonable management goals (FHS 2209.21). Transitory range, which is timbered land made temporarily suitable for grazing through fire or as a result of timber management practices, theoretically exists on the Forest. The amount of forage it contributes is insignifcant and is not included in the evaluation. The planning assumption made is commercial timber land is unsuitable for forage production. For a more detailed explanation of the range suitability see the Analysis of the Management Situation document, and/or the process records located in the Forest Supervisors office.

Timber

National Forest System lands were identified by three major categories in the process of determining lands capable of timber production: productive forest land, nonproductive forest land, and nonforest land. All 3,171,705 acres of land were classified into one of the three categories as follows:

Productive Forest land. Forest land which is capable of growing industrial crops of wood at or above the minimum boilogical growth established by the RPA program or the Regional Plan. This classification includes both accessible and inaccessable, stocked and non-stocked land.

Nonproductive Forest Land. Forest land which was identified as not capable of growing industrial crops of wood at least at the minimum biological growth potential established in the RPA program or the Regional Plan. Nonproductive forest land is classified as land not suited for timber production.

Nonforest Land. The Toiyabe National Forest identified land that has never supported forests and lands formerly forested where use for timber production is precluded by development for other use. (Note: Includes areas used for crops, improved pasture, residential or administrative areas, improved roads of any width and adjoining clearings, powerline clearings of any width, barren, grass, etc. If intermingled in forest areas, unimproved roads and nonforest strips must be more than 120 feet wide, and clearings, meadows, etc., more than one acre in size to qualify as nonforest land.) The nonforest land is classified as land not suited for timber production.

Productive (capable) Forest Land which has been legislatively or administratively withdrawn from timber production by the Secretary or the Chief of the Forest Service is not available. Productive not available forest land is classed as not suited for timber production.

Lands capable and available for timber production are evaluated for suitability utilizing a three stage test (FSM 2415). The following three stage test of suitability was used for all available and capable timber producing lands on the Toiyabe National Forest:

Stage I - Physical Suitability

Stage II - Economic Suitability

Stage III - Objective and Theme of the Forest Plan Alternative considering multiple use values and effects on timber production.

Stage I - Physical Suitability. The first test was to determine if technology is available that will ensure timber production, including harvesting, from the land without irreversible resource damage to soil productivity or watershed condition. Areas so strewn with boulders that logging is impractical were classed as unsuitable. Another test for physical suitability is whether or not there is reasonable assurance that such lands can be adequately restocked within five years after final harvest.

Stage I was the step used to determine tentatively suitable timber lands. For a more detailed explanation, see the Analysis of the Management Situation document.

Stage II - Economic Efficiency. The purpose of the Stage II analysis is to organize capable, available, and tentatively suitable timber producing lands into analysis areas that significantly affect timber management costs and values at various levels of management intensities (prescriptions). Capable and available forest land will be considered as economically suitable for timber production if and only if it is included in the set of lands that are efficient in meeting the timber productive goals for the Forest Plan.

All capable and available forest lands on the Las Vegas District will not be included in any FORPLAN solution. The Mt. Charleston lands are unique in that they are isolated, far removed from other areas of National Forest system lands. The area is an island in an area of predominately desert type, typical of the Mohave Desert. Slopes are generally very steep with serious soil/slope limitations and with uncertain regeneration. The presence of bristlecone pine, the species being among the oldest living organism in the world and of special scientific importance, further questions the advisability of managing these timbered lands in the normal manner.

Therefore, the commercial lands on Mt. Charleston are included as not suitable in the maximum timber benchmark and are dropped as being unsuitable economically. They were not considered further in developing the base harvest schedule for the Forest.

The following major elements have been determined to significantly affect Toiyabe National Forest timber management costs or values:

1. Access - affects the road development cost and 2 major divisions are considered.

   a. Areas within 1/2 mile of an existing road.

   b. Areas beyond 1/2 mile of an existing road.

2. Slope - affects two major timber cost considerations:
   Logging costs, and post sale treatment costs. Two slope group catagories are considered: 0-30% and 30%+.

   All of the tentatively available productive timber land that entered this stage of the process from Stage I is passed to Stage III once the economic analysis is complete.

Stage III - Final Suitability Test. The choice of the timber production goals for the Forest Plan depends upon the issues and concerns addressed by the alternatives. An alternative which places a higher emphasis upon timber production will generally allocate a larger land base to timber production. The exception to this rule occurs where it is more efficient to manage timber more intensively rather than increase the land base for timber production.

Several important points must be recognized at this stage:

1. The analysis does not start with a fixed land base. If land is available and physically suitable, it is eligible for allocation to a mix of multiple uses including some intensity of timber production. The intensity of production assigned the Forest subunits will depend upon the objective of the alternatives and the comparative advantage of Forest subunits to provide mixes of multiple uses.

2. The extent to which tradeoffs are made among resources will depend upon their relative values only when surplus resources exist (land and capital) to meet the minimum output requirements of the Forest alternative.

3. A Forest alternative considers timber production requirements over the entire length of the harvest schedule, not just the first decade. Land that is required to efficiently meet timber production goals for a Forest alternative for any decade of the planning period is suitable for timber production. This includes lands required to efficiently meet timber production goals for the RPA planning horizon (50 years) and to efficiently meet sustained yield criteria for the remainder of the harvest period.

4. Each Forest alternative will probably have a different set of suitable lands, depending upon the objective of the alternative. The selected alternative defines the land unsuitable for timber production. No harvest for timber production purposes can occur on these lands. When the Forest Plan is revised, however, this land is again available to meet the objectives of the Forest alternatives. If social objectives and Forest conditions have not changed, it will be designated as unsuitable once again. If conditions have changed, a different set of lands, larger or smaller may be designated as unsuitable.

Once an alternative has been selected and adopted as the Forest Plan, any land tentatively identified as not suited in Stage III is combined with the land identified as such in Stage I and becomes the land unsuited for timber production during the plan period. When a plan is revised or there is a significant amendment, this process, beginning with Stage I and continuing through Stage III, must be repeated. In other words, land classification decisions in one plan are subject to review and revision in subsequent revisions of the plan.

Harvest Scheduling and Regulation of Cut. A primary objective of Forest land and resource management planning is to provide for the orderly development and use of the renewable resources on a sustained yield basis. In order to achieve this objective, it is desireable to work toward a balanced or even distribution of timber age classes, while recognizing the difficulty of ever achieving a fully regulated Forest.

All roadless analysis areas greater than 5000 acres were considered in FORPLAN as suitable for Wilderness. The suitability analysis for all resources is contained in the process records. As previously mentioned, both the Analysis of the Management Situation document and the Process Records can be located at the Forest Supervisor's Office.

See page IV-25, table IV-7 for the results of the Stage II and III analysis.

DISTRIBUTIONS AND SCHEDULING ALTERNATIVES

The management prescriptions in the Toiyabe National Forest FORPLAN model contain a variety of distribution and scheduling alternatives for each analysis area or CAZ. A section in the FORPLAN model allows a wide range of timber scheduling opportunities for all analysis areas suitable for timber management practices. The process records contain details on how these management prescriptions were formulated.

MONITORING IMPLEMENTATION

The planning data provides a base from which changes can be measured, and as a control for the monitoring actions which are detailed in the Forest Plan. The accompanying draft Toiyabe National Forest Land and Resource Management Plan describes a detailed monitoring program to be used to monitor implementation of the preferred alternative.

SUBSEQUENT PROGRAMS FOR PLAN IMPLEMENTATION

The planning data base for the Toiyabe National Forest contains biological, physical, social and economic data which will help develop subsequent programs for plan implementation. As more and updated information becomes available the data base will be updated, revised, and improved.

SOURCES OF EXISTING DATA

Data used in the analysis was developed from the following sources:

1. Transportation Information System (TIS)
2. Analysis of the Management Situation (AMS) for the Toiyabe National Forest.
3. Timber sale contracts from 1975 to present, and the 10 year Timber Action Plan.
4. Forest Annual Accomplishment records.
5. Definition of outputs, activities and effects - Forest Service Manual, Management Information Handbook (FSH 1309.11a).
6. Timber strata, analysis area, roadless area, and zone maps.
7. California Wildlife Habitat Relationships Program, Northeast Interior Zone Volume III Birds and Volume IV Mammals.
8. Fish and Wildlife Habitat Capability Models and Special Habitat Criteria for the Northeast Zone National Forests.
9. Recreation Information Management System (RIM).

10. "Visual Management System", Agriculture Handbook 461.

11. "Recreation Opportunity Spectrum", Forest Service Handbook 1909.12, November 1980.

THE FOREST PLANNING MODEL

OVERVIEW

FORPLAN (short for FORest PLANning model) was the Linear Programming (LP) model used in the development and evaluation of benchmarks and alternatives. FORPLAN is a third-generation configuration of a series of LP models developed by the Forest Service to aid in resource management planning. Timber RAM and MUSYC, two predecessors, are single resource models designed to evaluate timber allocation problems. FORPLAN, on the other hand is designed to evaluate problems involving "multi-resource" outputs.

In general, linear programming is a mathmatical optimization technique which seeks to assign values to decision variables in such a way as to simultaneously satisfy a set of linear constraints and maximize or minimize a linear objective function. Linear programming has been applied to a diverse set of problems involving the allocation of scarce resources in an optimal manner. In the Forest Plan resource allocation model, management prescriptions (the decision variables) are allocated to areas of land (analysis areas) in a manner which maximizes present net value (the objective function) while satisfying certain conditions such as minimum or maximum levels of some Forest products (constraints). A brief description of the major components of the FORPLAN model follows.

ANALYSIS AREAS

As formulated, analysis areas represent both contiguous or noncontiguous areas of land. Noncontiguous analysis areas are generally representative of scattered areas of land possessing similar characteristics such as land class, condition class, work group, or some combination thereof. The principal reason for this type aggregation is to group areas with uniform response functions in biological and/or financial terms. The timbered areas on the Toiyabe constitute the noncontiguous analysis areas.

Contiguous analysis areas represent logical management units such as Wilderness. Assignment of these areas to a specific management emphasis as represented by management prescriptions is usually on an "all or nothing" basis, which means the analysis area must be assigned to one, and only one, type of management. The Toiyabe FORPLAN model has some roadless area zones in the Sierras which are contiguous. These roadless area zones can consist of contiguous and/or noncontiguous analysis areas either in portions or in their entirety. The range allotments are strictly lands subdivided by the type of range allotment; i.e. sheep and goat, or cattle and horse.

In the model, analysis areas form the basic units on which management decisions are made. A hierarchy of analysis area identifiers categorize these land units and provide a structure for formulating or describing resource assignment problems through the use of constraints and objectives functions. The design of such a hierarchy is critical to the correct specification of production possibilities on the Forest. For a detailed break-down of analysis area identifiers see section "Identification of Analysis Area Groups" of this appendix.

MANAGEMENT PRESCRIPTIONS

Management prescriptions represent a set of management practices or activities and their associated standard and guidelines. They are designed to produce a mix of outputs through time. Each prescription contains components of a production function for jointly produced outputs. Different analysis areas may utilize the same "prescription", however different output levels, costs, or benefits would occur do to inherent differences between analysis areas. Managment prescriptions are commonly referred as, Management Emphasis and Management Intensity, within the FORPLAN model. Timing and scheduling choices for activities to produce outputs is a part of each prescription.

ACTIVITIES

Activities represent active or passive management of the land. Further, activities incur costs; hence, represent choices for the use of capital outlays. Activities may be specific, such as: harvest 30 acres of mature Jeffrey Pine by a 2-step shelterwood pattern using a tractor logging method. Alternatively, the activity may be general, such as: general administrative expense occurs under alternative x. The activities associated with each management prescription are further defined by standards and guidelines. These standards and guidelines are described in detail in the Forestwide Standards and Guidelines located in the Forest Supervisor's Office.

OUTPUTS AND ENVIRONMENTAL EFFECTS

Outputs and environmental effects result from the activities modeled. Generally, as more money is applied to the activity set, more outputs are produced from the land. However, qualitative criteria are also included in the model; hence, there may be exceptions to the above generalization. Outputs may be priced directly in the model or may be included without price where estimation of price is not practical. Environmental effects included in the model represent quality differentials and will typically be represented through the use of constraints.

CONSTRAINTS

Constraints are used to ensure that the assignment of prescriptions to analysis area conforms to the emphasis of a particular alternative. FORPLAN constraints fall into four categories: (1) constraints for technical implementability, (2) constraints to ensure conformance to the minimum management requirements, (3) general timber policy constraints; i.e., nondeclining yield and harvest of timber stands generated at or beyond Culmination of Mean Annual Increment, and (4) discretionary constraints designed to achieve various levels of outputs and expenditure levels. The first three categories of constraints define production limits common to most alternatives. The fourth category completes the specification of the production surface for a paritcular alternative. Specification of the production surface and an objective function are sufficient conditions for the FORPLAN model to achieve an effecient assignment of prescriptions to analysis areas.

OBJECTIVE FUNCTION

The objective function guides the linear programming algorithm to an optimal solution. In Forest planning alternatives, the objective function is "maximize present net value" of all priced outputs. Nonpriced outputs and qualitative environmental effects are portrayed with specified constraint sets. Since constraints must always be satisfied, the objective function will never locate optimal solutions outside the scope of the constraints specified for outputs and environmental effects (whether or not they are priced). For this reason, it is desirable to consider marginal changes in solutions as constraint sets are adjusted. This "sensitivity analysis" is quite expensive, given the scope of the Forest planning problem, and will be performed only where a major issue or concern suggests that the benefits from additional analysis will outweigh the costs of the analysis.

DEVELOPMENT OF MANAGEMENT PRESCRIPTIONS

Management prescriptions were prepared for each analysis area within the Toiyabe National Forest FORPLAN model. These prescriptions were designed to measure management practices, yields and costs for a given emphasis and intensity of management. The emphases stressed one or more Forest resource (timber emphasis, wildlife emphasis, recreation emphasis, etc.). The intensity determined the intensity of management placed on that prescription. In order to ensure economic efficiency of the management prescription, professional judgement and historical data were used in developing the most cost effective management practices for management prescriptions and a FORPLAN analysis of cost efficiency of prescriptions was performed. All prescriptions were analyzed for conformance with the criteria of 36 CFR 219.27. Resource suitability analyses were performed (timber according to 36 CFR 219.14, recreation, 36 CFR 219.21, etc.). As a result of these analyses, certain prescriptions were limited to certain analysis areas.

DEVELOPMENT OF PRODUCTION COEFFICIENTS

Coefficients were derived for all scheduled yields in the Toiyabe National Forest FORPLAN model: developed recreation, dispersed recreation, wilderness use, mineral operating plans, energy leases, wildlife management indicator species, permitted livestock use, wild horse and burros, sawtimber, firewood, Pinyon Pine nuts, Christmas Trees, post and poles, water yield, sediment reduction, and water yield increase. Unit costs by activity for output production were based on actual experienced unit costs, or estimated unit costs based on historical data, research, and professional judgement. Based on a theoretical forestwide funding level, for each prescription, the activities and costs were formulated to carry out the prescription thrust and produce integrated outputs. These funding levels were estimated to be consistent with the management emphasis, and approach a reasonable funding level the Toiyabe could receive. Using historical data and professional judgement, I.D. Team members reviewed the data to assure cost effectiveness.

ANALYTICAL TOOLS

Analysis Prior to FORPLAN

Most of the analysis done prior to the running of the FORPLAN model was preliminary work needed to model the Toiyabe National Forest. Capability areas were mapped and inventoried. Similiar capability areas were grouped into analysis areas. Production coefficients (costs, values and yields) were prepared for the various resources. All cost and value coefficients developed for a specific resource were formulated by a resource specialists using historical data, research, and professional judgement. These coefficiencts were incorporated into management prescriptions. Resource specialists analyzed the information to ensure the prescriptions were cost effective and would accomplish the required analysis. Prescriptions were prepared to address issues and concerns (incorporating management practices, and standards and guidelines).

A socio-economic overview was prepared. This report detailed the social impact assessment area and baseline socio-economic conditions.

The Forest Wildlife Biologist identified management indicator species and their requirements.

FORPLAN Analysis

The linear program FORPLAN was used to formulate Forest-wide altenatives through a selection of prescriptions bases on an objective function to maximize present net value. Present net value is the discounted value of all benefits over a 150 year planning horizon minus the discounted costs for the same period. By using results from the FORPLAN model, the Interdisciplinary Team was able to analyze benchmarks and alternatives. As a result of the use of FORPLAN, the difference in present net value between alternatives are due to differences in the objectives of each alternative. These objectives require the application of a unique set of constraints to the FORPLAN model with a common objective function of present net value. These constraints led to a unique set of consequences defined in terms of present net value, resource yields, and quantitatively and nonquantitatively measured effects (including the response to each issue). Variations in consequences form the basis for analysis, evaluation, and comparison of alternatives.

Analysis Done Outside the FORPLAN Model

FORPLAN displays designated activities and outputs for each alternative, by analysis area and for the entire forest. The results of FORPLAN were used in the estimation or calculation of (1) Recreation Opportunity Spectrum, (2) Visual Quality Objectives, (3) range acres in satisfactory condition by the year 2030, (4) Management Indicator specie numbers except deer, (5) suitable and unsuitable commercial timber acres, (6) prescribed burning for range and widlife, (7) high mineral potential in wilderness recommendation, (8) land purchase, (9) acquisition and exchange, and (10) soil erosion over natural. The social-economic effects were modeled using IMPLAN by incorporating the results from FORPLAN by alternative.

DELINEATION OF ANALYSIS AREAS

Identification of Analysis Area Groups

Analysis areas were identified by the Interdiscipinary Team by using the following procedure:

- combining all "like" capability areas (this applies only to areas suitable for timber on the Toiyabe) into analysis areas. For example, capability areas that are Jeffrey Pine, non-retention, immature, < 30 % slope, and roaded were combined into one analysis area.

- Analysis areas are composed of both contiguous and noncontiguous areas of land.

- On the Toiyabe, analysis areas range in size from 1 acre to 242,000 acres.

- In the Sierra Nevada, portions and/or entire analysis areas were combined into Coordinated Allocation Zones. These CAZ's represent contiguous roadless areas, and areas where there are planned or existing development activities, based on differing issues and concerns.

- In Central Nevada, analysis areas consist of the non-roaded areas of existing range allotments, and the remaining roaded areas of range allotments.

Factors considered in the identification of analysis areas:

(1) Economic consideration - Production costs and yields were considered in selecting analysis area identifiers. For example, slopes greater and less than 30% was a stratification layer mapped and identified in the FORPLAN model. This allowed a better economic analysis based on different production costs and yields.

(2) Inventory and data reliability - The availability and reliability of existing inventory data was a consideration in selecting analysis area identifiers. Due to insufficient data on rangeland capability areas, and an I.D. Team plilosophy that range management is performed on an allotment as a whole the range allotment boundries were designated as analysis area boundaries. Data by range allotment was aggregated from range strata inventories stored in RIM.

(3) Computer model characteristics - Based on the way the I.D. team chose to model the resources (expecially rangelands), there were some limitations in the computer model. Should another approach have been taken, these modeling limitations may not have existed. The complexity of what is being modeled, and the degree to which relationships are modeled will determine whether the computer software can accommodate the user.

(4) Reporting needs - By delineating analysis areas in Central Nevada by range allotment boundaries, these analysis areas could be aggregated for reporting activities and outputs by district. However, the major reason for this analysis area delineation was because rangeland management is currently being performed on an allotment by allotment basis.

(5) The need for control by area - Legal constraints forced the Interdisciplinary Team to break out certain special areas as separate analysis areas, or CAZ's, as is the case with the Roadless areas in California and Nevada.

The following table (TABLE B-2 displays the analysis area identifiers used in the Toiyabe FORPLAN model.

TABLE B-2 COORDINATED ALLOCATION ZONES AND ANALYSIS AREA IDENTIFIERS USED IN THE TOIYBE FORPLAN MODEL

Coordinated Allocation Zones (CAZ's):

Zone 10	Pinyon/Juniper Area
Zone 20	Raymond Peak Core area
Zone 30	Tragedy-Elephants Back roadless area
Zone 40	Raymond Peak roadless area
Zone 50	Sweetwater roadless area
Zone 60	Hoover East roadless area
Zone 70	Carson-Iceberg Core roadless area
Zone 80	Hoover West roadless area & Hoover Wilderness
Zone 90	Excelsior roadless area
Zone 100	Dog Valley
Zone 110	Carson Front
Zone 120	Alpine
Zone 130	Walker
Zone 150	Hunter Creek roadless area
Zone 160	Carson Range roadless area
Zone 170	Horsethief South roadless area
Zone 180	Dardenelles roadless area
Zone 190	Cottonwood roadless area
Zone 200	Carson Iceberg roadless area
Zone 210	Leavitt Lake roadless area
Zone 220	Wellington Hills roadless area
Zone 230	Desert Creek Peak roadless area
Zone 240	Wildhorse roadless area
Zone 260	Lobdell roadless area
Zone 270	Wiley roadless area
Zone 280	Bald Mountain roadless area
Zone 290	Devils Gate roadless area
Zone 300	Long roadless area
Zone 310	Sugarloaf roadless area
Zone 320	Mount Olson roadless area
Zone 330	Buller roadless area
Zone 340	Mt. Hicks roadless area
Zone 350	Long Valley roadless area
Zone 370	Hoover East-South roadless area
Zone 380	Horsethief North roadless area

Level 1 Identifiers - Analysis areas in Central Nevada and Mt. Charleston area

ARCDOM	Arc Dome RA
DEVSEC	Developed Sector - East Side
BACCOU	Back Country/Wallace & Clark Canyon
BADEFL	Bade Flat C & H
BIRCHC	Birch Creek C & H
ELKHOR	Elkhorn C & H
GOLDPA	Gold Park C & H
HORSEH	Horse Heaven C & H
HOTSPW	Hot Springs Winter C & H
KELLYC	Kelly Creek C &H
KINGST	Kingston C & H

MARYSV	Marysville C & H
MONITW	Monitor Winter C & H
NORMON	North Monitor C & H
NORMOW	North Monitor Winter C & H
NORSHO	North Shoshone C & H
NORTHU	Northumberland C & H
REEDIC	Reeds-Indian Canyon C & H
SOUMON	South Monitor C & H
SOUSHO	South Shoshone C & H
SOSOIL	South Shoshone, Illinois Div C & H less Arc Dome
SOSOPA	South Shoshone, Paradise Div C & H
STONEB	Stoneberger C & H
TIERCR	Tierney Creek C & H
WASHIN	Washington C & H
WHITER	Whiterock C & H
ARCDMA	Arc Dome S & G less Arc Dome
BUNKER	Bunker S & G
REEDNK	Reeds-North Kingston S & G
SOUKIN	South Kingston S & G
BIGCRC	Big Creek Closure
AUSTWA	Austin Watershed
BARLCK	Barley Creek C & H
CLRERI	Cloverdale-Reese River C & H less Arc DomeL
LITFIS	Little Fishlake C & H
HUNTSC	Hunts Canyon C & H
MCKINN	McKinney C & H
MEADCA	Meadow Canyon C & H
MOORCR	Moores Creek C & H
NORMOO	North Moores Creek C & H
PAWACA	Pablo-Wall Canyon C & H less Arc Dome
ROUNMT	Round Mountain C & H
SAULSB	Saulsbury C & H
STONCA	Stone Cabin C & H
TABLMO	Table Mountain C & H
TWINRI	Twin Rivers C & H less Arc Dome
WILLCR	Willow Creek C & H
MRBFLS	Marble Falls RA 17001
SHEROJ	Sherman Peak RA 17002
PARAPK	Paradise Peak RA 17003
ELHORN	Elkhorn RA 17004
NSHOPK	North Shoshone Peak RA 17005
SSHOPK	South Shoshone Peak RA 17006
MTARDV	Mount Ardivey RA 17009
WLLCRK	Willow Creek RA 17011
BOBSCT	Bobscott RA 17014
BADECK	Bade Creek RA 17015
BUNKHL	Bunker Hill RA 17016
TOIYPK	Toiyabe Range Peak RA 17017
MARYCK	Marysville Creek RA 17018
SOTOIY	Southern Toiyabe RA 17019
BANKSP	Bank Spring RA 17024
TOQCAV	Toquima Cave RA 17025
CLIPGP	Clipper Gap RA 17026
SAMSCN	Sams Canyon RA 17027
MUDBLD	Mud Springs-Boulder RA 17028

IRNWLD	Iron Springs-Wildcat Peak RA 17029
NMORCK	North Moores Creek RA 17030
MTJEFF	Mount Jefferson RA 17031
MARIPO	Mariposa RA 17032
SLVRCK	Silver Creek RA 17033
SAGEHN	Sagehen RA 17034
FITZSP	Fitzpatric Spring RA 17035
ANTLPK	Antelope Peak RA 17036
BROCCN	Brock Canyon RA 17037
BDMTCN	Bald Mountain Cn RA 17038
HRSHVN	Horse Heaven RA 17039
TBLMTN	Table Mountain RA 17040
ROCKCN	Rock Canyon RA 17041
BWSAGE	Big White Sage RA 17042
BIGTEN	Big Ten RA 17043
GORGCN	Georges Canyon RA17044
ANTELP	Antelope RA 17045
SALSBY	Saulsbury RA 17047
WARMSP	Warm Springs RA 17048
REDPK	Red Peak RA 17049
MTCHRL	Mount Charleston RA 17050
FORWID	Forest Wide
OTHER	Other

LEVEL 2 IDENTIFIERS - DISTRICT 1 GRAZING ALLOTMENTS

CALIF	California
NEVADA	Nevada
DOGVAL	Dog Valley C & H
BALCAN	Balls Canyon S & G
DOGVLL	Dog Valley S & G
EVACAN	Evans Canyon S & G
CLEACR	Clear Creek C & H
GALECR	Galena Creek C & H
LITVAL	Little Valley C & H
NORCAN	North Canyon C & H
SNOVAL	Snow Valley C & H
MTROSE	Mt Rose S & G
BAMERA	Bamert C & H
BAGVAL	Bagley Valley C & H
BARBER	Barber C & H
BULCAN	Bull Canyon
COTTON	Cottonwood C & H
DRESSR	Dressler C & H
ELLEDG	Elledge C & H
HOPVAL	Hope Valley C & H
HSPRIN	Hot Springs C & H
MLBURY	Millbury C & H
NOBCAN	Noble Canyon C & H
WCREEK	Wolf Creek C & H
CAMPLO	Campbell-Loope S & G
LEVIAT	Leviathan S & G
COYOTY	Coyote C & H
DUMONT	Dumont C & H

FISVAL	Fish Valley C & H
MURCAN	Murray Canyon C & H
SLINK	Slinkard C & H
GCREEK	Green Creek S & G
OTHER	Other

LEVEL 3 IDENTIFIER - DISTRICT 2 GRAZING ALLOTMENTS

LOSTCA	Lost Cannon C & H
MILCAN	Mill Canyon C & H
HUNWHI	Hunewill Hills C & H
BUCKEY	Buckeye C & H
ROBCRK	Robinson Creek C & H
EAGLCK	Eagle Creek C & H
VIRGCK	Virginia Creek C & H
SARDIN	Sardine C & H
JUNCTN	Junction C & H
SILVCK	Silver Creek S & G
POISCK	Poison Creek S & G
SIERBL	Sierra Blanca-Devils Gate S & G
SOSWAU	South Swauger S & G
NOSWAU	North Swauger S & G
CAMERN	Cameron Canyon S & G
DUNDER	Dunderberg S & G
SUMMEA	Summers Meadows S & G
TAMARK	Tamarack S & G
RICKEY	Rickey S & G
PIUTEE	Piute C & H
BEARTR	Bear Trap S & G
FRYPAN	Frying Pan-Murphy Creek C & H
MTJACK	Mt Jackson C & H
BURCAM	Burcham S & G
COTNWD	Cottonwood S & G
SWTWTR	Sweetwater C & H
JUDGCM	Judge Chambers C & H
HUNTON	Huntoon Valley C & H
WHISKY	Whiskey Flat C & H
WILDHR	Wildhorse C & H
LARKIN	Larkin Lake C & H
POWLMT	Powell Mtn C & H
RISUE1	Risue C & H
SPRING	Spring Gulch C & H
MASONC	Masonic C & H
ROGCRK	Rough Creel C & H
CONWAY	Conway C & H
WELNTN	Wellington Spring S & G
SULPUR	Sulphur S & G
PINEBR	Pine Grove S & G
NYECAN	Nye Canyon S & G
SIMPSN	Simpson C & H
WICHMN	Wichman C & H
RCKLND	Rockland C & H
BLDMTN	Bald Mtn S & G
DSRTPK	Desert Peak S & G

DEERWT	Deer Winter Range
OTHER	Other

LEVEL 4 IDENTIFIER - WORK GROUP

JFPNRT	Jeffrey Pine - Retention
JFPNNR	Jeffrey Pine - Non-Retention
MXCNRT	Mixed Conifer - Retention
MXCNNR	Mixed Conifer - Non-Retention
LDGPRT	Lodgepole Pine - Retention
LDGPNR	Lodgepole Pine - Non-Retention
OTHER	Other than Commercial Forestland

LEVEL 5 IDENTIFIER - LAND CLASSIFICATION

OTHER	Logging not applicable to area
<30%NR	Slopes < 30% - Area Amenible To Tractor Logging - Nonroaded
NR>30%	Slopes > 30% - Area Amenible To Aerial Logging - Nonroaded
<30%RD	Slopes < 30% - Area Amenible To Tractor Logging - Roaded
RD>30%	Slopes > 30% - Area Amenible To Aerial Logging - Roaded

LEVEL 6 IDENTIFIER - CONDITION CLASS

SD/SAP	Seeds/Saps
IMMATR	Immature
MATURE	Mature
OTHER	Other

LEVEL 7 IDENTIFIER - MANAGEMENT EMPHASIS

GOAL 1	Goal 1
GOAL 2	Goal 2
GOAL 3	Goal 3
GOAL 4	Goal 4
GOAL 5	Goal 5
GOAL 6	Goal 6
TIMBR1	Timber Emphasis - 1
TIMBR2	Timber Emphasis - 2
TIMBR3	Timber Emphasis - 3
TIMBR4	Timber Emphasis - 4
TIMBR5	Timber Emphasis - 5
TIMBR6	Timber Emphasis - 6
TIMBH1	Timber-Haul Emphasis - 1
TIMBH2	Timber-Haul Emphasis - 2
TIMBH3	Timber-Haul Emphasis - 3
TIMBH4	Timber-Haul Emphasis - 4
TIMBH5	Timber-Haul Emphasis - 5

TIMBH6	Timber-Haul Emphasis - 6
RANGE1	Range Emphasis 1
RANGE2	Range Emphasis 2
RANGE3	Range Emphasis 3
RANGE4	Range Emphasis 4
RANGE5	Range Emphasis 5
RANGE6	Range Emphasis 6

LEVEL 8 IDENTIFIER - MANAGEMENT INTENSITY

FH--FH	A-Existing Stand - FH	:Second Growth - FH
FH-2CT	B-Existing Stand - FH	:Second Growth - 2CT-FH
FH-3CT	C-Existing Stand - FH	:Second Growth - 3CT-FH
2CT-FH	D-Existing Stand - 2CT-FH	:Second Growth - FH
2CT2CT	E-Existing Stand - 2CT-FH	:Second Growth - 2CT-FH
2CT3CT	F-Existing Stand - 2CT-FH	:Second Growth - 3CT-FH
3CT-FH	G-Existing Stand - 3CT-FH	:Second Growth - FH
3CT2CT	H-Existing Stand - 3CT-FH	:Second Growth - 2CT-FH
3CT3CT	I-Existing Stand - 3CT-FH	:Second Growth - 3CT-FH

IDENTIFICATION OF PRESCRIPTIONS

The National Forest Management Act (NFMA) regulations define management prescriptions as "management practices selected and scheduled for application on a specific area to attain multiple use and other goals and objectives." Generally, a management prescription is a set of treatments or practices to develop and/or protect some combination of resources on a particular land type.

The I.D. Team analyzed the management situation of the Toiyabe National Forest. As a part of that analysis, they determined the minimum activities necessary to conserve soil and water resources, prevent significant or permanent impairment of the productivity of the land, to maintain viable populations of existing native vertebrates, and to prevent the destruction or adverse modification of critical habitat for threatened and endangered species. These activities became minimum management requirements and were imbedded in the management practices, and/or standards and guidelines for the prescriptions.

The I.D. Team complied a list of management practices (activities presently occurring), needed to resolve issues or concerns, and needed to take advantage of resource development opportunities identified in the Analysis of the Management Situation. The I.D. Team, based on existing research, historical records and professional expertise examined these practices to determine if they would provide resource protection, minimize serious or long-term hazards, protect streams, etc., and maintain diversity. Practices selected were practices previously agreed upon by a joint committee of State and Forest Service personnel. Research used in formulating practices for prescriptions is noted in the process records. A summary listing is included in References Appendix IX.

To ensure an adequate range of management prescriptions for benchmark and alternative formulation, the I.D. Team (with the assistance of resource specialists) developed a set of management prescriptions with a variety of management emphases, intensities, management practices and standards and guidelines for each land type. These range from minimum level management prescriptions with little active management to management prescriptions containing high intensity management for timber, wildlife, recreation and wilderness. The current management benchmark/alternative was defined through the use of management prescriptions respresenting all activities presently being practiced. Issues were analyzed and prescriptions were developed for the positive solution to the issues. Special area prescriptions were developed for areas such as Wilderness Areas.

These prescriptions are responsive to issues and concerns in that most issues are resolved in one or more management prescriptions.

PRESCRIPTION DESCRIPTION AND STANDARDS & GUIDELINES

GOAL 1 - Minimum Level Management prescription:

Purpose: A management thrust that emphsizes the Administrations base level program (25% less than FY 82).

FORPLAN Level 7 (Management Emphasis) Identifiers for Goal 1:

--Goal 1 - Applied to all analysis areas in Central Nevada and Mt. Charleston portion of the forest.

--Timber 1 - A goal 1 prescription applied to all commercial timber analysis areas on the Carson District (Sierra).

--Timber Haul 1 - A goal 1 prescription applied to all commercial timber analysis areas on the Bridgeport District (Sierra).

--Range 1 - A goal 1 prescription applied to all non-commercial timber analysis areas in Central Nevada, range allotment analysis areas in the Sierra.

Major Forestwide "Functional" Standards & Guidelines by Resource:

Recreation. There will be minimum Recreation Planning to protect public safety and high-value resources. Only High-Risk E.A. will be reviewed. Visual quality will be retained. Cultural Resource Inventory is project related only, with maximum used of paraprofessionals to conduct the inventories. Cursory trail inventory records will be maintained. No interpretive work will be conducted through Visitor Information Services. Patrols will be performed on priority Developed sites when possible. Priorities will dictate the closure or removal of noncost-effective sites. Fees will be collected in cost-effective fee sites. Sites will be closed when resources show heavy damage. Public hazards will be corrected in operating sites, but beyond this, they will generally be maintained to RIM Condition Class 1. Trail maintenance efforts will be directed to protect public safety first. Law enforcement efforts will be directed where environmental engineering and education have been unsuccessful, and damages/losses are most significant.

Wildlife. The necessary surveys, planning, prescriptions, monitoring, cooperation, and administration will be provided to maintain viable wildlife populations. Wildlife studies will be established and conducted within the general guidelines found in FSM 2200, 2500, and 2600. Studies will be limited to Management Indicator species. Habitat management plans will be written for all areas with a wildlife management emphasis. All planning , surveys, and inventories will be coordinated with the other program elements. Project related work will be significantly decreased. Efforts will be made to removed wildlife species from the Threatened and Endangered list. The consultation process will be conducted according FSM 2671. Interagency cooperation with Nevada Department of Wildlife and California Fish and Game Department will be done as outlined in the Memorandum of Understandings in FSM 2611. Structural and non-structural habitat improvements will be used to maintain or enhance viable populations of wildlife on the Forest, and will be restricted to management indicator species.

Range. The Forest Range Action Plan prioritizes allotments and sets forth the tasks to be performed on each allotment.

The tasks vary from allotment to allotment because management is based on the merit of the allotment and because inventory, planning, administrative, and monitoring tasks are in different stages of completion. For example, range analysis, which is prerequisite to a management plan, remains to be done on low priority allotments. On the other hand, intensive management is being practiced on the high priority allotments having significant resource values.

Under this prescription, resources are directed to maintain Allotment Management Plans (AMP's) for the high priority allotments. Inspection or allotment administration is performed to the extent necessary to insure the management system is being followed and to insure that objectives to arrest critical range deterioration are being met. AMP's currently in effect for moderate and low priority allotments are to be maintained commensurate with available resources. No new AMP's are to be implemented nor will AMP's requiring a major revision be updated. The Annual Operating Plan (AOP) will serve as the management instructions for allotments falling in these later two categories.

The Annual Operating Plan is prepared for each allotment in consultation with the permittee. Allotment examinations, which are described in the AOP, are based on the monitoring provisions in the AMP. Examinations on allotments not under an AMP are principally directed to insure that the standard provisions of the grazing perrmit are being met, i.e. Part 1 and 2. Examinations to insure special provisions are being met, i.e. Part 3, are to be conducted to obtain a ten percent random sample of the allotments not under an AMP.

Range Analysis, new or updating, is done only when the information is critical to the making of a management decision concerning resource damage caused by livestock or big game.

Range improvements, both structural and non-structural, will only be for arresting range deterioritation. Grazing permittees are responsible for the maintenance of structural range improvements assigned to them in the grazing permit. The Forest Service is responsible for the maintenance of range improvements necessary to administer allotments, e.g. Administrative Site pastures and corrals.

Range cooperation with other Federal agencies, State agencies, and other interest groups and persons will continue commensurate with the allotment situation. Emphasis is on building as well as maintaining a good working relationship with permittees and implementing Interagency Agreements between the Bureau of Land Management and the Forest Service to simplify the management and administration of rangelands that form a natural unit but are currently being managed and administered by each agency.

The control of noxious farm weeds will continue. Priority will be given to projects that involve cooperation with State and County agents, weed control districts, private interests, and projects that involve several Forest Service functions, e.g. range, wildlife, roads and trails, recreation, timber, watershed.

Technical assistance and training concerning the Forest Sensitive Plant Program will continue. Assistance priority is given to projects that would impact plant populations having an endangered or threatened status or would impact critical habitat.

Wild Free-Roaming Horses and Burros. Management will be in accordance with the Wild Free-Roaming Horse and Burro Act of 1971 and subsequent regulations. Territory Management Plans are maintained to the extent that the population level is in balance with the habitat. Vacant territories and territory boundaries will remain status quo. Interagency Agreements between the Bureau of Land Management and the Forest Service will be followed to the extent resources allow. Emphasis on maintaining a good working relationship with wild free-roaming horse or burro interest groups will continue as well as cooperating and coordinating the program with other State and County agencies, and other interest groups and persons.

Timber. The minimum amount of work will be completed to develop, prepare and maintain the timber portion of the Forest Plan. The timber portion of the forest plan will be maintained and updated only when absolutely needed. T.M.I.S. will be maintained annually. Other control records will be maintained only as absolutely necessary.

The Las Vegas Timber Stands will be managed to maintain desired stands for a forested appearance. Shelterwood, selection, sanitation, or a special silvicultural standard will be utilized as needed to perpetuate timber appearances. Thinning cuts may also be applied to these stands.

The pinyon/juniper stands will be managed to perpetuate these stands. Within fuelwood areas in pinyon/juniper, use a restriction of not cutting trees less than 4 inches diameter (stump height) on permits. In addition, for seed production and wildlife habitat (diversity) leave some groups (minimum of one acre total area left in groups per 100 acres cut) of mature trees (1-5 or more trees in group) scattered through woodcutting area. Explain to the public the purpose of groups of trees (wildlife habitat, seed and shade) and small trees (future crop trees, cone producers and shade for other seedling establishment). In pinyon/juniper stands where there are only mature trees over large areas, identify cone producing trees and protect them from cutting. Slash will be scattered to provide shade for helping forage and tree establishment. If slash amounts are heavy enough to exceed acceptable fuel loading other methods of slash reduction will be used, but slash will still be left scattered throughout cut area.

Limited timber harvest management activities such as fuelwood removal, timber stand improvement, planting, or stand examination are permitted within unregulated forested lands.

Any use of pesticide chemicals for timber management purposes will follow policy and procedures found in FSM Chapter 2150. Chemicals should not normally be used within riparian areas for timber management purposes.

Silvicultural Examinations will be conducted to provide data for timber projects. Standards for examination procedures are contained in the current Regional publication, "Stand Examination Procedures." A detailed written silvicultural prescription is required before timber vegetative manipulation or cultural treatment takes place. Exceptions include removal of trees that block vision along roads, removal of hazard trees, right-of-way clearing, mining operations, minor and incidental amounts of fuelwood. Stand examinations will only be done to identify stands with insect or disease problems that need treatment to prevent spread of insects or disease.

Tree crops or tree cover on lands classed as forested will be established. Standards for planting and seeding are in FSH 2409.266 - Reforestation Handbook. Cone collection is part of the reforestation process and the standards are in FSH 2409.26f - Seed Handbook. All backlog planting areas will be examined for existing tree stocking, economics of planting, and sites growth capacity prior to deciding to plant the area. Natural regeneration will be relyed on more than planting. Reforestation areas will be fenced if needed to prevent damage from sheep and cattle grazing. On all reforestation areas evaluate the need for control of animals to protect planted, seeded, or naturally regenerated stands from damage by coordinating with wildlife management. Reforestation to desired stocking levels will be done within 5 years of final harvest cut. Stocking levels are shown in FSH 2409.26b - Reforestation Handbook. Reforestation needed per existing KV plans will be completed.

Intermediate cuttings and other treatments to improve the composition, condition, and growth increment of timber stands will be made. The excess small material in the stand will be utilized for products when possible. The best residual basal area will be utilized to maximize stand growth. Timber stand improvements needed per existing KV plans will be completed. Timber will be managed at a very low level. There will be no sawlog sales, but resources production capability will be maintained. Timber sale preparation administration will be applied in and around developed recreation sites and in insect and disease control work. Integrated pest management will be incorporated in all sale planning, preparation and administration activities.

Tractor logging generally will be permited on slopes 35% or less and 30% or less on granitic soils. Site specific environmental assessments to modify for tractor logging on steeper slopes to fit ground conditions will be used. Single tree selection and salvage standards for a minimum of 100 feet from the edges of all perennial streams, lakes, and other bodies of water will be used. For wildlife purposes a minimum number of snags will generally be left as 1) on timber land leave .72 snags/acres 2) on aspen/riparian areas leave 1.72 snags/acres, and 3) Around openings leave 4 snags/acres. Along major highways (State and Federal), the selection standard will be applied.

Sanitation (salvage) timber removal will be allowed only within 200 feet of developed recreation sites. Individual tree selection standard will only be allowed within the next 100 feet. The above standards apply unless a major change in vegetation occurs (such as a stand becomes old growth and has a high hazard potential) and work must occur within the developed site to change the vegetation or a vegetative management plan is developed for the site in which case the treatments developed would be applied.

No new commercial sawlogs sales will be made. Administration of existing timber sale contracts will continue until all contracts are closed. A low level of timber products (mostly fuelwood) will be provided from pinion/juniper component and from insect and disease control work in jeffrey pine, mixed conifer, and lodgepole pine components. Sale administration will follow regional standards in Log and Load Accountability, Financial Management (TSA), scaling, and check scaling.

Fuelwood may be sold or made available for free use as an integrated part of timber management. Sale procedures, administration and collections will follow uniform procedures in FSM 2430.42 (R4 Supplement No. 248) or as amended. Workroads needed to access fuelwood areas which are not available by existing system may be constructed, maintained and closed as funds permit and if environmentally sound.

Districts will evaluate the pine nut crop annually and determine if and where suitable areas exist for harvesting. These are to be readily accessible by vehicle. They will be delineated on a district administrative map. The map will become the basis for the sale program for the year. Utilize contributed funds (collections) for road construction and/or maintenance to encourage use of forest products which otherwise would not be merchantable. Commercial pine nut sales will be advertised and sold on a bid basis unless demands can be met and "over-the-counter" sales can be justified.

Personal use sales of Christmas trees for management purposes of pinyon/juniper will be utilized. In areas where Christmas tree sales are made, care will be taken to assure that the stand is not high graded or that stocking is reduced to an unsatisfactory level.

Post and pole sales will be utilized for management of overstocked pinyon/juniper stands. Post and pole sales can also be made in overstocked stands of other species.

Pinyon/juniper areas will be thinned or cut for multi-resource benefits. These include wildlife habitat improvement, increased range forage production and to meet the demand for fuelwood. Commercial sales will be made in various size to encourage small and large businesses. Contributed funds (collections) can be utilized for road construction/maintenance costs to provide access and protection of areas which would otherwise be unmanaged. A fuelwood policy for the Forest will be developed. The fuelwood policy will be reviewed and updated annually as needed.

A forest pest management program will be planned, directed and coordinated on the forest. Survey and suppression activities will be utilized to manage forest pests. Insect and disease problem areas will be monitored and control measures taken to attempt to prevent spread of the problems off the Forest. Insect and disease problem areas that are not likely to spread off the Forest will be monitored. The following treatment measures will be attempted; 1) if trees of species included in timber base are killed and the potential for rapid spread of the insect or disease, and 2) if the insect or disease problem is judged to be in epidemic stage, includes all species.

Activity caused fuels (slash) will be removed or treated to reduce fuel hazards and to improve visual resources. Slash will be utilized for fuelwood if possible. Slash treatment activities will be coordinated with fire management, air quality and wildlife habitat. Activity caused slash in roadside zones will be treated. Within the rest of the activity area, treat only heavy concentrations of slash.

Detection, prevention and investigation of violations of federal laws and regulations which are concerned with timber resources will occur. The law enforcement plan will reflect timber related law enforcement problems. This plan will emphasize prevention measures. Timber needs .68 person-years under this goal.

Cultural resource surveys will be completed prior to any ground disturbing project.

Soil and Water. The necessary data base, and planning will be provided for the best management of the soil and water resources. Soil and water inventories will be fully coordinated with the inventories of the other program elements. Inventories would be reactionary to outservice initiated activities or for the protection of public health and safety. Areas will be rehabilitated where resource damage has occurred. Improvement projects will be considered when necessary to protect public health and safety. FERC hydroelectric projects will be handled on a case-by-case basis. Adequate water will be provided to maintain and provided for all national resource values and uses. The water rights program will remain constant throughout all of the prescriptions. Watershed improvement structures will be maintained to the point necessary to perpetuate their usefullness. Only the improvements needed to protect investments will be maintained. Monitoring levels will be reduced commensurate with the reduction in management practices.

Minerals. Geologic reports shall be written as outlined in FSM 2884. All withdrawls and land exchanges will contain mineral evaluations. This prescription proportionately would have the least amount of outputs from general technical Inventory and Evaluation. Mineral withdrawls would be virtually nonexistent, except for Research Natural Areas (RNA). Land acquisitions and exchanges would be at a minimum. There would be no inventory of either special geologic areas nor common variety mineral materials. Validity examinations will be used to prevent unauthorized mining activities. Validity examinations will be conducted on all operations proposed within Research Natural Areas not withdrawn and wilderness areas (designated or proposed). Each Notice of Intent (NOI) or Operating Plan (OP) accepted will be processed in the same manner throughout the prescriptions. A detailed assessment of 70% of the NOI's and OP's submitted on the Forest will be conducted. Each lease application submitted to the Forest will be processed in the same manner throughout the prescriptions. All proposed development plans submitted to the Forest will be acted upon. Compliance checks will be conducted as described in FSM 2817. Contests and appeals will be used on a case-by-case basis to insure compliance of 36 CFR 228 regulations through adminstrative and judicial channels.

Fire Management. Fire Prevention is at Level 1. There will be minimum passive media management and coordinatin of seasonal restrictions, with token use of CFFP materials. Public and cooperators will be utilized in Fire detection. Force account detection following electrical storms will be used in high-risk situations only. For primary initial attack maintain capability approximating FY81, 5100-9's. Initial attack forces will productively support other elements and activities when pre-suppression objectives have been met and when not on fires. Optimal use of cooperators and regional resources for secondary attack. Minimal support will be used to maintain the organization. There will be no major capital investments. For initial attack suppression action and escaped fire suppression refer to Forest Service Manual (FSM). Fuel management inventory, treatment of natural fuels, and fuel-break construction are not performed for this prescription. Interagency opportunities to support inital attack capability will be optimized. Passive fire cause investigations will be performed.

Facilities. The transportation system will be planned, developed and operated to provide user safety, convenience and effienciency to accomplish land and resource management objectives. Transportation System review will be performed on the entire system to establish a basis for road management policy which is coordinated with land and resource management objectives by the management team. All reconstruction engineering, construction and reconstruction activities for arterial and collector roads are not applicable for this goal. For traffic management, the analysis, control and use of the Transportation System will support the accomplishment of land and resource management goals. On-the-ground maintenance will be performed on an emergency basis, accomplishing only high priorities forestwide. All preconstruction engineering, construction engineering and construction and reconstruction activities for all trails is not applicable to this goal. FA&O construction and reconstruction is also not applicable to this goal. Structures will be maintained to no less than minimum standards for health and safety for the users. Potable water systems will be maintained and monitored to standards to protect the health of the public and FS personnel. Wastewater systems, including treatment facilities, will be maintained and monitored to standards to avoid creating public hazards. These will maintain and restore water quality and prevent future pollution. Technical inspection will be performed annually on all high, and selected moderate and low hazard dams to monitor conditions and ensure maintenance is accomplished to minimize hazards to downstream life and property.

GOAL 2 - A current level prescription:

Purpose: A prescription that uses the 1981 budget, activities, and outputs. This projects into the future the outputs that would occur if current activities were continued.

FORPLAN Level 7 (Management Emphasis) Identifiers for Goal 2:

--Goal 2 - Applied to all analysis areas in Central Nevada and Mt. Charleston portion of the forest.

--Timber 2 - A goal 2 prescription applied to all commercial timber analysis areas on the Carson District (Sierra).

--Timber Haul 2 - A goal 2 prescription applied to all commercial timber analysis areas on the Bridgeport District (Sierra).

--Range 2 - A goal 2 prescription applied to all non-commercial timber analysis areas in Central Nevada, range allotment analysis areas in the Sierra.

Major Forestwide "Functional" Standards & Guidelines by Resource:

Recreation. Same a Goal 1 with the following exceptions:
Recreation planning is at a slightly higher level, in response to issues and NEPA requirements. Insuring that recreation is fully analyzed as a key opportunity on the Toiyabe. This goal emphasizes Visual Quality Objectives (VQO) and Visual planning in all Environmental Assessments (EA). There will be no new starts in interpretive planning. The existing trail plans will be maintained. There would be participation with S.H.P.O. in the development of statewide and forest wide archaeological plans, such as the recently approved, "archaeological elements for the Nevada Historic Preservation Plan." RIM will be maintained to FSM/Forest Service Handbook (FSH) standards. For Cultural Resource Inventory, select areas to be inventoried based on issues, values, risks, and input from S.H.P.O.. A Forestwide cultural resources overview, based on archival review will be developed. The existing trail system inventory will be maintained. Enhance cultural resources only after meeting project mitigation and protection needs. Special use responses will be handled at 75% of maximum efficiency. Developed sites will be patrolled daily during use season on the Carson (D-1), Bridgeport (D-2), and Las Vegas (D-5) Districts; and every other day in Central Nevada. This goal calls for striving to provide the current RIM managed season capacity while maintaining RIM Condition Class 2. Minimum legal requirements for ORV administration will be met. Trail reconstruction should be one mile per year based on management team priority. See Forestwide Standards and Guidelines for the trail maintenance schedule.

Wildlife. Same as Goal 1 with the following exceptions:
The process to establish, conduct, and analyze studies will not change through the management prescriptions. However, the number of studies implemented, or the purposes for establishment will change. In addition, range studies will be conducted on a site specific basis, particularily on those areas with a wildlife management emphasis. Plans and inventories will be developed on a case-by-case basis. The number of plans and/or inventories will increase over Goal 1. Project related work will increase, increasing the need for prescriptions. The level of monitoring will increase over Goal 1. Where not conflicting with other more important resource values, threatened and endangered species whould be relocated in unoccupied habitat. Consultation and Cooperation will increase over Goal 1. Non-structural improvement will be used for other wildlife in addition to the management indicator species. Structural habitat improvement will be used for management indicator species, and other selected wildlife species.

Range. This prescription is the same as Goal 1 but has the following exceptions:

This prescription represents about a 25 percent increase in resource management over the minimum level prescription allowing a proportionate increase in implementation of the Forest Range Action Plan. Allotment Management Plans for the high priority allotments are maintained so that implementation of the plan is scheduled and objectives are met. Allotment Management Plans for moderate priority allotments are maintained to insure that objectives to correct range deterioration are met. Low priority allotments are maintained commensurate with the available resources.

Range Analysis is performed under the Goal 1 criteria but updating other than new or major updates, is a normal task that is done as a part of maintaining AMP's for the high priority allotments.

Wild Free-Roaming Horses and Burros. This prescription is the same as Goal 1 except that emphasis is placed on the removal of WH&B increasing on National Forest System lands outside of territories.

Timber. The following are the same as Goal 1:
Timber resource management planning and inventories for Las Vegas timber stands, pinyon/juniper stands, unregulated forest land and pesticides; silvicultural examinations and prescription guidelines; reforestation guidelines; timber stand improvement guidelines; fuelwood preparation and administration standards; pinyon pine nut standards; Christmas tree standards; post and pole standards; pinyon/juniper cordwood standards; other misc. forest product sale standards; insect and disease surveys and suppression guidelines; treatment of activity fuel guidelines; law enforcement guidelines; support for timber guidelines; and cultural inventory standards.

This prescription is the same as Goal 1 with the following exceptions:
All necessary work will be completed to develop, prepare and maintain the timber resource portion of the Forest plan. The timber portion of the forest plan will be maintained and updated annually to reflect needed changes. Timber management control records including TMIS will be maintained annually. Silvicultural examination and stand treatment need identification will be accomplished every 20 years on all available timber land. Use stand examination information for site specific data (such as volume/acre, growth rates, etc.) for timber planning.

Silvicultural examinations in pinyon/juniper stands do not have to follow regional publication "Stand Examination Procedures." The examination procedure should utilize an existing procedure or be designed to produce the following information; 1) Acres from which fuelwood pinyon nuts, Christmas trees, and posts and poles can be produced, 2) Volume or amounts of all these products that can be produced, and 3) Current accessibility to above acres or need and possibility for building roads to above acres.

Natural regeneration stocking will meet stocking levels prior to scheduling final removal cut of shelterwood standard. Schedule planting could be considered if natural regeneration success is poor. Research should be promoted to determine the best thinning schedule and stocking level to provide the best volume growth per acre. Stands will be scheduled by priority of need for treatment from insect and disease standpoint. Moderate acres per year will be thinned.

Timber will be managed for moderate levels of outputs of sawlogs and and products. There will be a mixture of management intensities. The following are the silvicultural standards by species:

Jeffrey and Lodgepole Pine
Silvicultural Standard: Two step shelterwood - Rotation age 130 years
1st step - Seed Cut - Remove 80% of existing volume
2nd step - Removal Cut - Remove remaining overstory volume
Thinning cycle - 20 years

Mixed Conifer
Silvicultural Standard: Three-step shelterwood - Rotation age 130 years
1st step - Preparation Cut - Remove 60% of existing volume
2nd step - Seed Cut - Remove 1/2 of remaining volume
3rd step - Removal Cut - Remove remaining overstory volume
Thinning cycle - 20 years.

Jeffrey, Lodgepole Pine and Mixed Conifer
Silvicultural Standard: Three-step shelterwood - extended rotation of 200 years
1st step - Preparation Cut - Remove 60% ov existing volume
2nd step - Seed Cut - Remove 1/2 of remaining volume
3rd step - Removal Cut - Remove remaining overstory volume
Thinning Cycle - 40 years

Jeffrey, Lodgepole Pine and Mixed Conifer
Silvicultural Standard: Clearcut - Rotation age 130 years
1st step - Clearcut - Remove all existing volume
Maximum clearcut size - 20 acres
Assure that the area is reforested either by natural or artificial regenration.
Thinning cycle - 20 years

Jeffrey, Lodgepole Pine and Mixed Conifer
Silvicultural Standard: Selection - Uneven-aged Stand Structure
Generally all trees greater than 24 inches DBH are cut. Control of stand is to maintain the desired age class distribution. Maintain approximately 150 basal area per acre.
Cutting cycle - 20 years

Jeffrey, Lodgepole Pine and Mixed Conifer
Silvicultural Standard: Sanitation Cut (salvage)
Removal of dead, dying, deteriorating or susceptible trees.
Cutting cycle - whenever needed

Jeffrey, Lodgepole Pine and Mixed Conifer
Silvicultural Standard: Special Cut
Removal of trees for other than silvicultural purposes.
Utilize for sawtimber those trees with a diameter at breat heights (DBH) of 12 inches or greater.
As a minimum follow Regions 5-year timber sale planning process to insure timely completion of steps to completed timber sale.

For wildlife purposes, a minimum number of snags will generally be left as follows: 1) on timber land leave 1.08 snags/acre, 2) in aspen/riparian areas leave 3.08 snags/acre, and 3) around openings leave 4 snags/acre.

Timber products will be provided from all components. The timber management goal is a moderate MCF output on a sustained yield basis. Timber management will be strongly influenced by economics with intensive and non-intensive management occuring. The stands chosen for management will be those with the best PNV. The determination of sustained yield MCF output and management will be based upon an examination of the economics involved in applying various management schemes to the species strata. Of the various species managed on the Toiyabe, Jeffrey pine and western white pine are the most valuable. The species price differential, logging costs, different thinning schemes, different regeneration methods, and rotation lengths comprise the major areas affecting economics and amount of output.

The thinning schemes during a rotation proposed are:

No thinning
One thinning - precommercial
One thinning - commercial
One thinning - precommercial with two thinnings commercial
One thinning - precommercial with three thinning commercial

The timing options of the thinning cuts must also be examined. Experience on the Toiyabe indicates that shelterwood harvest and natural regeneration are the most workable for timber management. A moderage level of other timber products (mostly fuelwood) would also be provided.

Any shelterwood silvicultural standard can be applied within maximum modification, modification, and partial retention visual resource zones. Clearcut silvicultural standard can be applied in maximum modification visual resource zones. In modification visual resource zones, patch cuts can be applied but no larger than 5 acres. In partial retention visual resource zones patch cuts can be applied but no larger than 1 to 2 acres. Within retention visual resource zones, only salvage and selection silvicultural standards can be applied.

For species included in timber base, current insect and disease problem areas will be treated to attempt to control problems. Thinning of stands will be the primary way for prevention of bark beetles and for treating dwarf mistletoe. Small clearcuts can also be used for treating dwarf mistletoe provided the cut will fit within scheduled harvest. Fuel treatment standards will be developed and implemented for the Forest.

Timber emphasis by intensity:

TIMBR2 FH--FH and TIMBH2 FH--FH - In the existing stand, under the even-aged management system this prescription involves management of the existing stand by application of only a final harvest cut with no commercial thinning during the rotation. The final harvest cut may be a shelterwood cut, or a clearcut. For existing stands implementation may occur from age: 120 to 320 for Jeffrey Pine, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

Following rotation, under even-aged managment system, this prescription involves management of the subsequent stand by application of only a final harvest cut with no commercial Thinning during the rotation. The final harvest cut may be a shelternwood cut or a clearcut. For the subsequent stands, implementation may occur from age: 120 to 130 for Jeffrey Pine, 120 to 130 for Mixed Conifer, and 120 to 130 for Lodgepole Pine. In the retention zones, implemenation of selection silvicultural standard occurs.

TIMBR2 FH-2CT and TIMBH2 FH-2CT - In the existing stand, under the even-aged management system this prescription involves management of the existing stand by application of only a final harvest cut with no commercial thinning during the rotation. The final harvest cut may be a shelterwood cut, or a clearcut.For existing stands implementation may occur from age: 120 to 320 for Jeffrey Pine, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

Following rotation, under the even-aged management system, this prescription involves management of the subsequent stand by application of a final harvest cut with 2 commercial thins during the rotation. The final harvest cut may be a shelterwood cut or a clearcut. For the 2 intermediate thins, implementation of the first may occur at ages 80 or 90 with the second thin on a 20 year cycle in the rotation prior to the final harvest. Implementation of final harvest may occur from age: 120 to 130 for Jeffrey Pines, 120 to 130 for Mixed Conifer, and 120 to 130 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

TIMBR2 FH-3CT and TIMBH2 FH-3CT - In the existing stand, under the even-aged management system this prescription involves management of the existing stand by application of only a final harvest cut with no commercial thinning during the rotation. The final harvest cut may be a shelterwood cut, or a clearcut. For existing stands implementation may occur from age: 120 to 320 for Jeffrey Pine, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

Following rotation, under the even-aged management system, this prescription involves management of the subsequent stand by application of a final harvest cut with 3 commercial thinnings during the rotation. The final harvest cut may be a shelterwood cut or a clearcut. For the 3 intermediate thins, implementation of the first may occur at ages 60 or 70 with the other thins on a 20 year cycle in the rotation prior to the final harvest. Implementation of final harvest may occur from age: 120 to 130 for Jeffrey Pines, 120 to 130 for Mixed Conifer, and 120 to 130 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

TIMBR2 2CT-FH and TIMBH2 2CT-FH - For the existing stand, under the even-aged management system, this prescription involves management of existing stands by application of final harvest cut with 2 commercial thinnings during the rotation. This final harvest cut may be a shelterwood cut or a clearcut. For the 2 intermediate thins, implementation of the first may occur at ages 80 or 90 with the second thin on a 20 year cycle in the rotation. Implementation of final harvest may occur from age: 120 to 320 for Jeffrey Pine, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

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TIMBR2 2CT2CT and TIMBH2 2CT2CT - For the existing stand, under the even-aged management system, this prescription involves management of existing stand by application of final harvest cut with 2 commercial thinnings during the rotation. This final harvest cut may be a shelterwood cut or a clearcut. For the 2 intermediate thins, implementation of the first may occur at ages 80 or 90 with the second thin on a 20 year cycle in the rotation. Implementation of final harvest may occur from age: 120 to 320 for Jeffrey Pine, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

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TIMBR2 2CT3CT and TIMBH2 2CT3CT - For the existing stand, under the even-aged management system, this prescription involves management of existing stand by application of final harvest cut with 2 commercial thinnings during the rotation. This final harvest cut may be a shelterwood cut or a clearcut. For the 2 intermediate thins, implementation of the first may occur at ages 80 or 90 with the second thin on a 20 year cycle in the rotation. Implementation of final harvest may occur from age: 120 to 320 for Jeffrey Pine, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

Following rotation, under the even-aged management system, this prescription involves management of the subsequent stand by application of a final harvest cut with 3 commercial thinnings during the rotation. The final harvest cut may be a shelterwood cut or a clearcut. For the 3 intermediate thins, implementation of the first may occur at ages 60 or 70 with the other thins on a 20 year cycle in the rotation prior to the final harvest. Implementation of final harvest may occur from age: 120 to 130 for Jeffrey Pines, 120 to 130 for Mixed Conifer, and 120 to 130 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

TIMBR2 3CT-FH and TIMBH2 3CT-FH - For the existing stand, under the even-aged management system, this prescription involves management of the subsequent stand by application of a final harvest cut with 3 commercial thinnings during the rotation. The final harvest cut may be a shelterwood cut or a clearcut. For the 3 intermediate thins, implementation of the first may occur at ages 60 or 70 with the other thins on a 20 year cycle in the rotation prior to the final harvest. Implementation of final harvest may occur from age: 120 to 320 for Jeffrey Pines, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

In the existing stand, under the even-aged management system this prescription involves management of the existing stand by application of only a final harvest cut with no commercial thinning during the rotation. The final harvest cut may be a shelterwood cut, or a clearcut. For existing stands implementation may occur from age: 120 to 130 for Jeffrey Pine, 120 to 130 for Mixed Conifer, and 120 to 130 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

TIMBR2 3CT2CT and TIMBH2 3CT2CT - For the existing stand, under the even-aged management system, this prescription involves management of the subsequent stand by application of a final harvest cut with 3 commercial thinnings during the rotation. The final harvest cut may be a shelterwood cut or a clearcut. For the 3 intermediate thins, implementation of the first may occur at ages 60 or 70 with the other thins on a 20 year cycle in the rotation prior to the final harvest. Implementation of final harvest may occur from age: 120 to 320 for Jeffrey Pines, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

Following rotation, under the even-aged management system, this prescription involves management of existing stand by application of final harvest cut with 2 commercial thinnings during the rotation. This final harvest cut may be a shelterwood cut or a clearcut. For the 2 intermediate thins, implementation of the first may occur at ages 80 or 90 with the second thin on a 20 year cycle in the rotation. Implementation of final harvest may occur from age: 120 to 130 for Jeffrey Pine, 120 to 130 for Mixed Conifer, and 120 to 130 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

TIMBR2 3CT3CT and TIMBRH2 3CT3CT - For the existing stand, under the even-aged management system, this prescription involves management of the subsequent stand by application of a final harvest cut with 3 commercial thinnings during the rotation. The final harvest cut may be a shelterwood cut or a clearcut. For the 3 intermediate thins, implementation of the first may occur at ages 60 or 70 with the other thins on a 20 year cycle in the rotation prior to the final harvest. Implementation of final harvest may occur from age: 120 to 320 for Jeffrey Pines, 120 to 370 for Mixed Conifer, and 120 to 350 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

Following Rotation, under the even-aged management system, this prescription involves management of the subsequent stand by application of a final harvest cut with 3 commercial thinnings during the rotation. The final harvest cut may be a shelterwood cut or a clearcut. For the 3 intermediate thins, implementation of the first may occur at ages 60 or 70 with the other thins on a 20 year cycle in the rotation prior to the final harvest. Implementation of final harvest may occur from age: 120 to 130 for Jeffrey Pines, 120 to 130 for Mixed Conifer, and 120 to 130 for Lodgepole Pine. In the retention zones, implementation of selection silvicultural standard occurs.

TIMBR2 NONCUT and TIMBH2 NONCUT - Goal 2 was selected, but due to economics, the stand will not be managed for sawlog production. No stand management prescriptions.

Soil and Water. Same as Goal 1 with the following exceptions: Inventories will used on a minimal basis to provide data specific to timely resource conflicts. Planning will be reactionary in scope. Correct unsatisfactory watershed conditions will be corrected by treating high value areas in a cost effective manner where conditions are in a active state of degradation. Treatment will be done on a priority basis with consideration for the highest resource values and risk of resource loss. Maintenance schedule will reflect 33% of maintenance needs annually. Monitoring levels will increase as resource work activities increase. Selected snow courses and rain guages will be read.

Minerals. Same as Goal 1 with the following exceptions: The number of inventories increase slightly over Goal 1. Mineral withdrawls will be considered. Land exchanges and acquisitions will increase. A detailed assessment of 80% of the NOI's and OP's submitted on the Forest will be conducted.

Fire Management. Same as Goal 1 with the following exceptions: For Fire Prevention, there will be passive media coordination and management of seasonal restrictions forest-wide. CFFP material will be purchased and distributed randomly (See Forestwide Standards and Guidelines for details on distribution by district). Utize public and cooperator detection to the fullest. Supplement by force account, as needed, to keep burned acres at an acceptable level. Modify fuels to reduce hazard to meet VQP's in harvest and other activity areas. Initiate limited treatments of natural fuels (as part of the Sierra Front Initiative) to reduce severe life and property hazards. For fuel break construction, projects will have the following priority: 1) protect life and property, 2) protect the highest resource values, and 3) to provide optimal multi-resource benefits.

Facilities. Same a Goal 1 with the following exceptions: Under transportation system planning and inventory, develop area plans for high use areas other than timber to accomplish resource management objectives. Complete one district per year. For road operation, develop a priority list of arterial and collector roads to initiate traffic studies and determine roads with questionable jurisdiction. Develop a road operation plan which includes maintenance management and provides coordination instructions for regulation and control of traffic forestwide. Increase maintenance activities 26% to include lower priorities. Facility maintenance will be increased. Primary and secondary base series will be updated at least once a years. Transportation planning will be accomplished in conjunction with timber sale preparation activities starting at least five years prior to scheduled sale date. Timber purchaser activities will comply with Timber Sale contract sections on road construction and reconstruction. Approximately one half the total miles of road with primary resource value of timber will be maintained annually. Dam administration and management is the same as Goal 1.

Same as Goal 4:
All preconstruction engineering, construction and reconstruction activities for arterial and collector roads and for all trails.

Same as Goal 3:
FA&O construction and reconstruction.

GOAL 3 - Low intensity management:

Purpose: This is low intensity thrust that emphasizes a mixture of both non-commodity and commodity outputs.

FORPLAN Level 7 (Management Emphasis) Identifiers for Goal 3:

--Goal 3 - Applied to all analysis areas in Central Nevada and Mt. Charleston portion of the forest.

--Timber 3 - A goal 3 prescription applied to all commercial timber analysis areas on the Carson District (Sierra).

--Timber Haul 3 - A goal 3 prescription applied to all commercial timber analysis areas on the Bridgeport District (Sierra).

--Range 3 - A goal 3 prescription applied to all non-commercial timber analysis areas in Central Nevada, range allotment analysis areas in the Sierra.

Major Forestwide "Functional" Standards & Guidelines by Resource:

Recreation. The following are the same as Goal 1:
The cultural resource inventory standards, visual quality inventory, visual absorption inventory, cultural resource evaluation standards, cultural resource protection guidelines, law enforcement guidelines and standards, cooperative law enforcement, and search and rescue.
The rest of the activities occuring under Recreation for goal 3 are the same as goal 2.

The following describes the differences from Goal 1 and 2:
This prescription fully maintains the RIM system. Cultural Resource Evaluation will be made on sites with National Register potential, where continued degradation may endanger ther integrity of the site. Under this goal an average of one site per five years will be nominated to the National Register. Cultural resource protection will occur on sites with nation register potential. Maintain recreation sites to RIM Condition Class 1 or 2 levels. Administration of recreation special use sites, and patrol is at a slightly higher intensity of administration than Goal 2.

Wildlife. The following are the same as Goal 1:
Administration planning cooperation; surveys; inventories and planning; and prescriptions.

The following are the same as Goal 2:
Wildlife studies; monitoring; threatened and endangered species recovery efforts; consultation; Cooperation; non-structural habitat improvement projects; structural habitat improvement projects; and structural habitat maintenance projects.

The following describes the additions to goal 2:
For wildlife studies, in addition to goal 2, more range studies will be converted. Timber compartment exams will incorporate the collection of wildlife habitat information. Studies will increase over goal 2. More areas will be adjusted to a wildlife management emphasis. These areas will need inventories and plans. The number of plans and/or inventories will increase over goal 2. All projects within key wildlife habitats will have prescriptions written for them. The number of prescriptions, level of monitoring, consultation, and cooperation will increase over goal 2.

Range. This prescription is similar to Goal 2 except that emphasis is placed on directing resources into range improvements to arrest range deterioration on all allotments under an AMP. Management emphasis is on extensive rather than intensive grazing systems.

Wild Free-Roaming Horses and Burros. This prescription is the same as Goal 2.

Timber. The following are the same as Goal 2:
Timber resource management planning and inventory standards and guidelines; silvicultural examination and prescription guidelines; reforestation (backlog); timber stand improvement guidelines; fuelwood sale preparation and administration standards; pinyon pine nut standards; Christmas tree standards; post and pole standards; pinyon/juniper cordwood standards; other misc. forest product standards; insect and disease surveys and suppression guidelines; treatment of activity fuel guidelines; law enforcement standards and guidelines; support for timber guidelines; and cultural inventory standards.

The following describes the deviations from goal 2:
Stand examinations will only be done to identify stands with insect or disease problems that need treatment to maintain the stand. Stand examinations will be done prior to thinning treatments. Reforestion needed per existing KV plans will be completed, and work on the most promising sites. Timber stand improvements needed per existing KV plans will be completed, and a low level of acres are thinned to provide a continuing low level of fuelwood. Timber will be managed for outputs of moderate levels of products while maintaining sawlog production capability. Apply timber sale preparation and administration around and within developed recreation sites, and in insect and disease control work. For wildlife purposes a minimum number of snags will generally be left as follows: 1) on timber land leave 1.44 snags/acre, 2) in aspen/riparian areas leave 4.8 snags/acre, and 3) around openings leave 4 snags/acre. A moderate level of timber products (mostly fuelwood) will be provided from all components. Sales of fuelwood will continue to be made through the timber stand improvement, and insect and disease control programs. Small clearcuts and thinning can be used for treatment of dwarf mistletoe. Treatment of insect and disease problems is undertaken instead of prevention of problems. Fuel treatment standards will be developed and implemented for the Forest through coordination with The Sierra Front Initiative Vegetative Management Plan.

TIMBR3 and TIMBH3 - No sawlog sales under this goal, so, no stand managment prescriptions.

Soil and Water. The following are the same as Goal 1:
Soil and water improvement Guidelines, administration management, rights/use management, maintenance, and monitoring.

The following are the same as Goal 2:
Soil and water improvement standards.

The following describes the deviations from goals 1 and 2:
Highly significant watersheds will be inventoried. This will eliminate some of the reactionary facets of watershed management. Plans will be based on these inventories. Maintenance will be to reflect 60% of maintenance needs annually. Soil and water resource monitoring will be implemented on a representative sample of all activities that have the potential to degrade the soil and/or water resources, as a check on BMP implementation and effectiveness. All snow courses and rain guages will be read.

Minerals. The following are the same as Goal 1:
General technical inventory and evaluation standards; the site specific technical investigation standards; processing of exploration proposals; processing of lease applications; processing of site specific development proposals, administration; and contests hearings and appeals.

The following are the same as Goal 2:
The general technical inventory and evaluation guidelines; and the site specific technical investigation guidelines.

The following describes the deviations form goals 1 and 2:
Mineral withdrawls will be considered a management option in resolving land use conflicts. Inventories for special interest geologic areas and common variety mineral materials would be implemented on a minimum scale. A process by which geologic hazard areas are identified will be developed on the Forest. A detailed assessment of 90% of the oeprating plans and/or Notices of Intent on the Forest will be conducted. The prescription is the same as described under Goal 2. Municipal watersheds will be added to the sensitive area list.

Fire Management. The following are the same as Goal 1:
Fire reinforcements; treatment of active fuel standards; and fuel treatment and area maintenance.

The following are the same as Goal 2:
Treatment of active fuels guidelines; and fuelbreak construction.

The following describes additions and deviations from goals 1 and 2:
Fire prevention will be at Level 2 (aggressive). There will be positive media exposure, prompt fire investigation and follow-up. There will also be aggressive hazard inspections and use of fire restrictions when necessary. Public contact will be through interagency field personnel and the media. All efforts will be intensified during periods of high fire danger and high use periods. Site specific hazard reduction will be made where appropriate. In addition to goal 2, this goal calls for joining and integrating with BLM lightning detection system for the Sierra and Las Vegas, on a limited basis. The size and effectiveness of initial attack organization will increase. Initial attack forces will be selected and cross-trained to productively support other elements and activities when pre-suppression objectives have been met, and when not on fires. Cooperative effort and interagency NIIMS involvement will increase in intensity. Interagency overhead teams will be established under a unified command concept. The role of joint dispatching will increase. Capitalize on opportunities to upgrade support functions on an

interagency basis. Integrate natural fuel treatment for hazard reduction will be integrated with all other resource needs on an interdisciplinary basis. Interagency programs and involvement will increase wherever feasible.

Facilities. The following are the same as Goal 1:
Bridge and major culvert preconstruction and reconstruction; facility maintenance standards; and dam administration and management.

The following are the same as Goal 2:
Transportation system planning and inventory standards; road operation standards; FA&O construction and reconstruction; and geometronics.

The following are the same as Goal 4:
All reconstruction engineering, construction, and reconstruction activities for arterial/collector roads and trails.

The following describes the deviations from Goals 1 and 2:
Transportation system analysis will be performed on the entire system. Site surveys will be prepared for high priority structures as determined from the bridge replacement plan. At least one bridge per decade will be replaced. At least one deferred maintenance project per year will be accomplished. There will be a 120% increase in facility maintenance for high priority district projects as determined by the management team. Potable water systems standards are the same as Goal 1 for minimum or base O&M. There will be a 30% increase to engineering for select supply and treatment systems to gather data for condition survey reports.

GOAL 4 - An amenity and non-commodity prescription:

Purpose: A management thrust that emphasizes amenities and non-commodity outputs such as dispersed recreation, wildlife, fish, and soil & water.

FORPLAN Level 7 (Management Emphasis) Identifiers for Goal 4:

--Goal 4 - Applied to all analysis areas in Central Nevada and Mt. Charleston portion of the forest.

--Timber 4 - A goal 4 prescription applied to all commercial timber analysis areas on the Carson District (Sierra).

--Timber Haul 4 - A goal 4 prescription applied to all commercial timber analysis areas on the Bridgeport District (Sierra).

--Range 4 - A goal 4 prescription applied to all non-commercial timber analysis areas in Central Nevada, range allotment analysis areas in the Sierra.

Major Forestwide Standards and Guidelines by Resource:

Recreation. The following are the same as Goal 1:
Cultural resource inventory standards; cultural resource evaluation standards; cultural resource protection guidelines; law enforcement guidelines; and the cooperative law enforcement guidelines.

The following are the same Goal 2:
General recreation planning guidelines; interpretive planning standards; cultural resource planning guidelines; general recreation inventory guidelines; cultural resource inventory guidelines; cultural resource overviews guidelines; trail inventory guidelines; administration and operation of interpretive sites standards; administration of special use sites; recreation special use administration; and trail system operations.

The following are the same as Goal 3:
RIM inventory; cultural resource protection standards, administration and operation of recreation sites; maintenance standards of recreation sites; and resource treatment standards.

The following describes variations from Goals 1, 2, and 3:
Recreation planning will be at a level that emphasizes enhancement of dispersed recreation opportunities. In addition to the guidelines for Goal 2, complete quality dispersed area plans will be done for all significant use areas. This Goal incorporates dispersed recreation trends, projections, and long range resource needs in plans. Interpretive plans for all ranger districts will be completed and updated. This prescription calls for refining existing trail plans to insure responsiveness to increasing dispersed use. This Goal improves the quality of data gathered on dispersed recreation use and the opportunities in areas of heavy use. Programmatic cultural resource inventory will be conducted in support of VIS and enhancement opportunities. Visual quality inventories will be refined overall. Visual absorption inventories will be intensified. This Goal updates trail condition surveys. Evaluate all significant cultural resource properties. One cultural resource property annually will be nominated to the National Register until the potential is reached. Cultural resource properties will be enhanced based on and in coordination with VIS and interpretive plans. Dispersed facilities will be constructed as needed to protect public health & safety, and to reduce environmental degradation. Sanitation and trailhead facilities will be added as appropriate based on use. Selected interpretative facilities will be constructed. Coop level will increase with the Inyo National Forest. Visual Information Service (VIS) activities will be intensified in heavy use areas. Interpretive services will be integrated with administration of dispersed use. Fully administer Off-Road Recreation Vehicle (ORV) plans will be fully administered with optimum signing and patrolling. Trails will be constructed where needed to accommodate increasing use (an average of 5-7 mile annually).

Wildlife. All standards and guidelines are the same as Goal 1, with the following exceptions and additions:
Wildlife studies will be systematically established in all key wildlife habitats on the Forest. All range studies will be converted to habitat studies. Timber compartment exams will reflect habitat data base needs. Studies will increase over Goal 3. Habitat management plans will be systematically developed for all areas on the Toiyabe National Forest. The plans will be developed in the same manner we currently generate allotment management plans. The number of plans and/or inventories will increase over Goal 2. Prescriptions will be developed for every project impacting wildlife habitat. The level of monitoring, and consultation will increase over Goal 3. Non-structural, and structural habitat improvement projects will be considered for all wildlife species.

Range. This prescription is similar to Goal 3.

Wild Free-Roaming Horses and Burros. This prescription is similar to Goal 2 but has the following exceptions:
All objectives in Territory Management Plans will be met. Analysis of the management situation will be conducted to determine if vacant territories should be eliminated or if they have potential for being re-stocked. A similar analysis is conducted to determine if territory boundaries should be adjusted or remain as established in 1971. Opportunities to enhance WH&B requirements within existing territories will be explored.

Timber. The following are the same as Goal 1:
Timber resource management planning and inventory guidelines; timber resource management planning and inventory standards and guidelines for Las Vegas, pinyon/juniper, unregulated forest land, and pesticides; silvicultural examination and prescription guidelines; reforestation (backlog) guidelines; timber stand improvement (backlog) guidelines; fuelwood preparation and administration standards; pinyon pine nut standards; Christmas tree standards; post and pole standards; pinyon pine/juniper cordwood standards; other misc. forest product sale standards; insect and disease surveys and suppression guidelines; treatment of activity fuel guidelines; law enforcement guidelines; support for timber guidelines; and cultural inventory standards.

The following are the same as Goal 2:
The silvicultural standards.

The following are deviations from either Goal 1 and/or 2:
Stand examinations will be completed before any vegetative manipulation or cultural treatment and within areas of insect or disease problems. Natural regeneration tries will be checked 3 years after harvest. If not adequate for stocking standards, planting will be scheduled. The best residual basal area will be utilized to maximize stand growth, except that the residual basal area controlled more by wildlife habitat needs. A low level of acres would be thinned to support the fuelwood program. The timber management for sawlogs will be in response to other resource needs, and products will be produced at a moderate level. For wildlife purposes a minimum number of snags will generally be left as follows; 1) for timber lands leave 1.8 snags/acre, 2) for aspen/riparian areas leave 4.8 snags/acre, and 4) around openings leave 4 snags/acre. A low level of MCF output of timber by commercial sawlog sales will likely occur as the result of wildlife habitat improvement projects. A moderate level of timber products (mostly fuelwood) will be provided from all components. Samll clearcuts and thinning can be used for treatment of dwarf mistletoe. Treatment of insect and disease problems is undertaken instead of prevention of problems. Fuel treatment standards for the Forest will be developed and implemented through coordination with the Sierra Front Initiative Vegetative Management Plan. Law enforcement activities have a high priority. A law enforcement plan will reflect a high level of planned work and training for timber law enforcement activities. The law enforcement plan will emphasize prevention measures. Patrols and projects for law enforcement in timber areas will be planned and implemented. Timber needs .45 person/years under this goal.

TIMBR4 FH--FH and TIMBH4 FH--FH - same as goal 2.
TIMBR4 FH-2CT and TIMBH4 FH-2CT - "
TIMBR4 FH-3CT and TIMBH4 FH-3CT - "
TIMBR4 2CT-FH and TIMBH4 2CT-FH - "
TIMBR4 2CT2CT and TIMBH4 2CT2CT - "

TIMBR4 2CT3CT and TIMBH4 2CT3CT - "
TIMBR4 3CT-FH and TIMBH4 3CT-FH - "
TIMBR4 3CT2CT and TIMBH4 3CT2CT - "
TIMBR4 NONCUT and TIMBH4 NONCUT - "

Soil and Water. This prescription is the same as Goal 1 with the following additions:
All Forest watersheds will be prioritized for implementation of inventories. Improvement projects will be completed (as identified through planning) on all forest watersheds. All water claims will be quantified. Maintenance will be scheduled to reflect 100% of maintenance needs annually. Monitoring plans will be developed and implemented for the analysis area.

Minerals. All standards and guidelines are the same as Goal 1 with the following additions:
Districts will inventory and prioritize lands for mineral withdrawl. Withdrawls will be encouraged as a process to solve incompatible resource conflicts. Land acquisitions would be accelerated, requiring greater mineral evaluation effort. Non-commodity resources will be emphasized during the acquisition of lands. Districts will implement an inventory and evaluation process for special interest geologic areas. A process by which geologic hazard areas could be inventoried will be developed. Inventories for common variety mineral materials will not be implemented. Key wildlife habitats, and significant dispersed recreation sites will be added to the sensitive area list. Reclaimation measures will be required on all operations.

Fire Management. The following are the same as Goal 1:
Fuel treatment area maintenance.

The following are the same as Goal 2:
Fuelbreak construction.

The rest of the activities are the same as Goal 3 with the following additions:
A D-4 or equivalent size tractor will be acquired for suppression and project work. Complete forestwide fuel inventories will be needed for comprehensive multi-resource vegetation managment plan(s). Emphasis will be on the Sierra Front, Las Vegas, and other priority areas.

Facilities. The following are the same as Goal 1:
Transportation system planning and inventory; and dam administration and management.

The following are the same as Goal 2:
Road operation standards; geometronics; transportation planning for timber; arterial/collector and local road preconstruction engineering, construction, and reconstruction; timber purchaser construction and reconstruction; road maintenance, and land line location.

The following are the same as Goal 3:
Bridge & major culvert preconstruction and reconstruction; and facility maintenance.

The following describes deviations and additions to Goals 1, 2, and 3:
Transportaion system analysis will be initiated on the entire system. Area

plans will be developed for all areas on at least one district per year for all resources other than timber to accomplish resource management goals. For arterial/collector preconstruction engineering, construction, and reconstruction; road standards will be held to the minimum necessary to provide a safe facility with minimum impact on resource including visuals. Highest priority will be given to reconstructing existing arterial/collector roads to a maintainable standard before extensive construction of new facilities. Trail location and re-location will be in areas to minimize resource impact, including visuals. Trails will be located to minimized impact in key wildlife habitat. Dam administration and management, operation and maintenance (O&M) is the same as Goal 1, with a technical inspection performed annually on 50% of the moderate hazard dams.

GOAL 5 - A market prescription:

Pupose: A management thrust that emphasizes timber, range, developed recreation, minerals, and special uses.

FORPLAN Level 7 (Management Emphasis) Identifiers for Goal 5:

--Goal 5 - Applied to all analysis areas in Central Nevada and Mt. Charleston portion of the forest.

--Timber 5 - A goal 5 prescription applied to all commercial timber analysis areas on the Carson District (Sierra).

--Timber Haul 5 - A goal 5 prescription applied to all commercial timber analysis areas on the Bridgeport District (Sierra).

--Range 5 - A goal 5 prescription applied to all non-commercial timber analysis areas in Central Nevada, range allotment analysis areas in the Sierra.

Major Forestwide "Functional" Standards and Guidelines by Resource:

Recreation. The following are the same as Goal 1:
The cultural resource inventory standards; visual quality and absorption inventory; cultural resource evaluation standards; cultural resource nominations; cultural resource protection guidelines; law enforcement, cooperative law enforcement, and search and rescue.

The following are the same as Goal 2:
General recreation planning; visual resource planning; interpretive planning; trail planning; cutural resource planning; general recreation inventory; cultural resource inventory guidelines; cultural resource overviews; trail inventory; administration of recreation special use sites; recreation use administration; recreation special use administration; trail reconstruction; trail system operations; and the trail maintenance guidelines.

The following are the same as Goal 3:
The cultural resource evaluation guidelines; cultural resource nominations; and trail maintenance standards.

The following are the same as Goal 4:
Cultural resource protection standards; and Interpretive sites administration and operation guidelines.

The following describes deviations or additions to Goals 1, 2, 3, and 4:
Recreation planning for Goal 5 is at a level that emphasizes enhancement of developed recreation opportunities. In addition to Goal 2 for general recreation planning, plans will emphasize activities that increase returns to the treasury, and identify opportunities for new revenue-producing concessions and recreation special uses. Interpretive planning will identify opportunities to interpret commodity activities to visitors and the general public. In addition to Goal 2 for general recreation inventory, Goal 5 maintains RIM and refines it for developed sites and composites. This Goal enhances cultural resource properties based on and in coordination with developed recreation use and plans. Selected sites will be reconstructed to preclude future closure due to deterioration. One or two new developed site will be constructed every decade. All recreation sites will be operated at full service. All cost effective site will be brought up to, and maintained at FSM 2300 standards. This Goal allows the minimum resource treatment necessary to provide safety and prevent accumlulative site degradation; while preparing vegetation managment plans for priority developed sites. Trail construction will be done where needed to enhance developed sites.

Wildlife. The following are the same as Goal 1:
Administration planning cooperation; wildlife studies; surveys, planning standards; prescriptions; monitoring; consultation; cooperation; non-structural and structural habitat improvement; and structural habitat maintenance.

The following are the same as Goal 2:
Surveys, inventory, and planning standards; and threatened and endangered species recovery effort standards.

The following describes the deviation and addition to Goals 1 and 2:
Wildlife studies will be limited to Managment Indicator species. The number of studies undertaken would be the amount necessary to provide data for the maintenance of viable populations of MIS. Prescriptions will be developed for every project impacting wildlife habitat. The level of monitoring and consultation will increase over Goal 4. Non-structural and structural habitat improvements will be restricted to maintain minimum viable populations of Management Indicator Species.

Range. This prescription is similar to Goal 1 but has the following exceptions:
Under this prescription, the Forest Range Action Plan will be fully implemented to obtain optimum forage production and utilization. Range Analysis and the development of Allotment Management Plans will be completed as scheduled. Objectives of implemented AMP's will be met. The implementation of management systems and the installation of range improvements, both structural and non-structural, will be scheduled for high and moderate priority allotments. These later two tasks may or not be as scheduled on low priority allotments. Monitoring will occurr on all allotments as planned. Permittee participation in all management aspects will be sought.

Wild Free-Roaming Horses and Burros. This prescription is the same as Goal 4.

Timber. The following are the same as Goal 2:
Timber resource management planning and inventory standards and guidelines for the Sierras, Las Vegas area, pinyon/juniper, unregulated forested land, and pesticides; silvicutural examination and prescription guidelines; pinyon/juniper stand exam standards; reforestation (backlog) guidelines; timber stand improvement (backlog) guidelines; silvicultural standards; fuelwood sale preparation and administration standards; pinyon pine nut standards; Christmas tree standards; post and pole standards; pinyon/juniper cordwood standards; other misc. forest products sale standards; insect and disease suveys and suppression guidelines; treatment of activity fuel guidelines; law enforcement guidelines; support for timber standards; and cultural inventory standards.

The following are deviations from goal 2:
Silvicultural examination and stand treatment need identification will be accomplished every 10 year on all available timber lands. Stand examination information for site specific data (such as volume/acre, growth rates, etc.) for timber planning will be used. Natural regeneration tries will be checked 3 years after harvest, and if this is not adequate for stocking standards, planting will be scheduled. Research will be conducted to determine the best thinning schedule and stocking level to provide the best volume growth per acre. All stands will be thinned on a cutting cycle of 20 years. Acres thinned per year will be at a high level and should keep all stand growing at optimum rates. Intensive timber management will be attempted to produce high output levels of sawlogs and fuelwood. Intensive timber management will be used in all timber stands. All opportunities to provide fuelwood will be utilized. The timber management goal is a high MCF output on a sustained yield basis. Any silvicultural standard can be applied in any visual zone except within 300 feet of developed recreation sites and along major highways. For species included in the timber base, a high program of work in insect and disease surveys and suppression will be done. Insect and disease detection surveys and evaluations will be accomplished routinely. Emphasis will be placed on identifying high risk potential in stands and determining if prevention efforts are needed to control losses. Emphasis will be placed on thinning overstocked Jeffrey pine stands to reduce the risk of bark beetle attacks. Emphasis will also be placed on dwarf mistletoe surveys and control measures in all timber stands. Small clearcuts which take into consideration other resource values may be used where not normally permitted. Fuel treatment standards for the Forest will be developed. Standards will be used to determine when slash treatment is needed and how much treatment needs to be done to reduce fuel loading to and acceptable level. Coordination with the Sierra Front Initiative Vegetative Management Plan will be used. Slash treatment will be done to either meet fuel loading standards or to a high level of slash reduction if fuel loading standards are lacking. All acres of activity created fuels will be treated.

TIMBR5 FH--FH and TIMBH5 FH--FH - Same as Goal 2
TIMBR5 FH-2CT and TIMBH5 FH-2CT - "
TIMBR5 FH-3CT and TIMBH5 FH-3CT - "
TIMBR5 2CT-FH and TIMBH5 2CT-FH - "
TIMBR5 2CT2CT and TIMBH5 2CT2CT - "
TIMBR5 2CT3CT and TIMBH5 2CT3CT - "
TIMBR5 3CT-FH and TIMBH5 3CT-FH - "

TIMBR5 3CT2CT and TIMBH5 3CT2CT - "
TIMBR5 NONCUT and TIMBH5 NONCUT - "

Soil and Water. The following are the same as Goal 1:
Inventory guidelines; planning guidelines; improvement guidelines; administration management; right/use managment; maintenance guidelines; and monitoring.

The following are the same as Goal 2:
Inventory standards; planning standards; improvement standards; and maintenance standards.

The only addition to these goals is that monitoring will be restricted to the commodity related resource programs.

Minerals. The following are the same as Goal 1:
Processing exploration proposals; processing of lease applications; processing of site specific development proposals; administration; and contests and hearing appeals.

The following are the same as Goal 2:
The general technical inventory and evaluation; and site specific technical investigation.

The following describes the additions and deviation from goals 1 and 2, for goal 5:
The emphasis under this prescription will be to produce minerals while maintaining (at an acceptable level) the non-commodity resources. Mineral withdrawls will be considered only as a last resort to mitigation management. Land exchanges and/or acquisitions be used to obtain land containing commodity related resources. An inventory of special interest geologic areas will not be undertaken. Districts will undertake inventories to determine the location and extent of common variety mineral materials. Validity examinations will be used only on a case-by-case basis. Validity examinations will be used on those projects where reclamation measures cannot adequately mitigate the long-term loss of resources. All NOI's and OP's submitted on the Forest will be processed.

Fire Management. The following are the same as Goal 1:
The District programs for fire prevention.

The following are the same as Goal 2:
Fire detection guidelines; Treatment of activity fuels guidelines; and fuelbreak construction guidelines.

The following are the same as Goal 3:
Fire Prevention guidelines; primary initial attack standards; secondary attack fires guidelines; fire support and facilitating services; fuel management inventory standards; treatment of natural fuels; air operations program; and law enforcement.

The following are the same as Goal 4:
Fire reinforcements.

The following describes the deviations and additions from Goals 1, 2, 3, and 4:

The BLM lightning detection system will be joined and integrated into the system for the Sierra and Las Vegas. The size and effectiveness of the initial attack organization will be increased. Initial attack forces will be cross-trained to productively support other elements and activities when pre-suppression objectives have been met, and when not on fires. For secondary attack fires, cooperative efforts will be intensified and interagency NIIMS involvement increased. An interagency overhead team will be established. This goal will complete all integrated forestwide fuel management inventories needed for comprehensive multiresource vegetation management plans. It will complete plans for Sierra Front, Las Vegas, and other areas where resource opportunities exist. This prescription has the highest level of fuel treatment maintenance.

Facilities. The following are the same as Goal 1:
Facility maintenance; and dam administration and management O&M.

The following are the same as Goal 2:
Geometronics; timber transportation planning; arterial/collector and local road reconstruction engineering, construction, and reconstruction; timber purchaser construction and reconstruction; road maintenance; and land line location.

The following are the same as Goal 4:
Transportation system planning and inventory; preconstruction engineering, construction, and reconstruction for arterial/collector roads and trails; bridge and major culvert preconstruction and reconstruction; road operation standards; and FA&O construction and reconstruction standards.

GOAL 6 - Wilderness prescription:

Purpose: A management thrust that emphasizes wilderness management.

FORPLAN Level 7 (Management Emphasis) Identifiers for Goal 6:

--Goal 6 - Applied to all analysis areas in Central Nevada and Mt. Charleston portion of the forest.

--Timber 6 - A goal 6 prescription applied to all commercial timber analysis areas on the Carson District (Sierra).

--Timber Haul 6 - A goal 6 prescription applied to all commercial timber analysis areas on the Bridgeport District (Sierra).

--Range 6 - A goal 6 prescription applied to all non-commercial timber analysis areas in Central Nevada, range allotment analysis areas in the Sierra.

Major Forestwide "Functional" Standards & Guidelines by Resource:

Recreation. The following are the same as Goal 1:
Cultural resource evaluation standards; cultural resource protection guidelines; law enforcement; and cooperative law enforcement.

The following are the same as Goal 2:
General recreation planning; interpretive planning standards; cultural resource planning; general recreation inventory; cultural resource inventory; cultural resource overiews; trail inventory; some administration and operation of recreation and interpretive site standards; administration of recreation special uses; and trail system operations.

The following are the same as Goal 3:
RIM inventory guidelines; administration and operation of recreation site guidelines; maintenance of interpretive sites; and resource treatment.

The following describes the deviations and additions to goals 1, 2, and 3, to produce goal 6:
Recreation planning will be at a level that emphasizes enhancement of dispersed recreation opportunities. It calls for completion of quality dispersed area plans for all signifcant use areas. Dispersed recreation trends, projections, and long range resource needs will be incorporated into plans. There will be a refinement of existing trail plans to insure responsiveness to increasing dispersed use. This goal calls for improving the quality of data gathered on dispersed recreation use and opportunities in areas of heavy use. Visual absorption inventory will be intensified. One cultural resource property will be nominated to the National Register annually till the potential is reached. Sanitation and trailhead facilities will be added as appropriate, based on use. The development of interpretive associations will be encouraged. This goal will reconstruct an average of 5 to 7 miles of trails annually; and constructs an average of 5 to 7 miles of trails to accommodate increasing use.

Wildlife. All standards and guidelines are the same as Goal 1, with the following additions:
Range studies will be converted on a site specific basis, particularily on those areas with a wildlife management emphasis. The number of studies will increase over goal 1. Plans and inventories will be developed on as case-by-case basis. The number of plans and/or inventories will increase over Goal 1. Project related work will increase, increasing the need for prescriptions. The level of monitoring will increase over Goal 1. Structural habitat improvement will be for Management indicator species, and selected wildlife species.

Range. This prescription is similar to Goal 2 but with these exceptions: Emphasis is placed on intensive management systems, where cost-effective, for allotments outside wilderness areas. Opportunities to increase forage production by vegetative manipulation and to convert secondary range into primary range will be exercised. Permittee participation in non-structural as well as structural improvements will be sought. Extensive Management systems will be applied to allotments within wilderness areas. Stocking will be based on proper use criteria compatible with the wilderness values. Priority will be given to arresting range deterioration on allotments in wilderness areas over allotments outside of wilderness areas. Permittee cooperation as well economics will be important criteria in monitoring of grazing within wilderness areas.

Wild Free-Roaming Horses and Burros. This prescription is similar to Goal 4 but with this exceptions. The opportunity to enhance WH&B populations using structural and non-structural range improvements will occur primarily on territories outside of wilderness areas.

Timber. The following are the same as Goal 1:
Timber resource management planning and inventory guideline; silvicultural examination and prescription standards and guidelines; reforestation (backlog) guideline; pinyon pine nut standards; and insect and disease surveys and suppression guideline.

The following are the same as Goal 4:
Law enforcement standards and guidelines.

The following are deviations from either Goal 1 or Goal 4:
Timber areas within wilderness areas will be removed from the timber base. Planning needed within wilderness areas will be done to monitor stand conditions. Planting will not be done for timber management purposes. Planting may be done for other resources within wilderness areas. Timber management does not apply within wilderness areas. Requests for timber on mining claims will be reponded to, and a sound silvicultural procedure will be prescribed that maintains the character of the stand to preserve wilderness values. Insect and disease activities will be monitored within wilderness areas. Control measures will be considered and undertaken if the insects or disease are seriously affecting wilderness qualities.

TIMBR6 and TIMBH6 - There will no timber management under this goal.

Soil and Water. This goal prescribes that the necessary data base be provided for the best management of the soil and water resources. Soil and water inventories will be fully coordinated with the inventories of the other program elements. Planning will be used to develop managment options relevant to soil and water related improvements and/or problems. This goal calls for rehabilitation of areas where resource damage has occurred. Watershed improvement techniques will be used (in coordination with the other resource elements) to improve declining watershed conditions. Administration levels will be commensurate with the work outlined within each prescription narrative. FERC hydroelectric projects will be handled on a case by case basis. All Bureau of Reclamation withdrawls will be maintained. All agreements with municipalities to manage municipal watersheds will remain at the same level through the prescriptions. This goal provides for adequate water to maintain, and provide for all natural resource values and uses. It maintains watershed improvement structures to the point necessary to perpetuate their useful viability. Monitoring will be done to maintain an appropriate data base in evaluating management impacts on soil and water resources.

Minerals. All withdrawls and land exchanges will contain mineral report evaluations. This prescription proportionately will have the least amount of outputs for this activity. Mineral withdrawls will be virtually nonexistent, except for Research Natural Areas (RNA). All RNA's on the Forest will be prioritized and scheduled for mineral withdrawl. Land acquisition and exchanges will be at a minimum. There will be no inventory of either special geologic areas, nor common variety mineral materials. Validity examinations will be used to prevent unauthorized mining related activities. The validity examination procedure will also be used to substantiate mining related patent applications, and will be handled on a case by case basis. Validity examination will be conducted on all operations proposed within RNAs not withdrawn and wilderness areas (designated or proposed). No new claims will be filed after December 31, 1983 (Wilderness Act 1964). Each NOI or OP accepted will be processed in the same manner througout the prescriptions. Programatic environmental assessments will be developed to identify areas sensitive to mining on each district. This goal will conduct a detailed assessment of 70% of the NOI's and OP's submitted on the Forest. There will be a review of all lease applications submitted by the BLM, in a timely fashion, and recommendations made to protect the necessary surface resources. Mineral activities will be administered to the level necessary to insure compliance with federal and state regulations.

Fire Management. Fire prevention will be at level 1 (passive). There will be passive media coordination and management of seasonal restrictions forest-wide. The public and cooperators will be used for fire detection and supplemented by force account as needed to keep acres burned at an acceptable level. Initial attack forces will productively support other elements and activities when pre-suppression objects have been met and when not on fires. This prescription supports the regional program, and places equipment on contract where feasible. Fire support and facilitating services will be maintained at a minimal level to maintain the organization. No major capital investments will be made. There will be passive fire cause investigations.

Facilities. The following are the same as Goal 1:
Transportaion system planning and inventory; bridge and major culvert preconstruction and reconstruction; road operation; facility maintenance; and dam administration.

The following are the same as Goal 3:
FA&O construction and reconstruction guidelines.

The following are the same as Goal 4:
All preconstruction engineering, construction, and reconstruction acitivities for arterial/collector roads and trails.

The following Table (TABLE B-3) shows the acres by management area prescription for each alternative. A list follows the table which describes the management area prescription, and gives the FORPLAN goal these prescriptions were derived from.

The previous mentioned standards and guidelines by goal are a condensed form of the "Forest Plan Standards and Guidelines" book. See also the FSM 219.27 and the Regional Guide for standards and guideline direction. These can be located at the Forest Supervisor's Office of the Toiyabe National Forest.

TABLE B-3 ACRES BY MANAGEMENT AREA PRESCRIPTION

In Thousand Acres

Prescription	Alt A Current Program	Alt B Market Emphasis	Alt C Nonmarket Emphasis	Alt D RPA 1980	Alt E Constrained Budget	Alt P Mkt/Nonmkt Mix	Alt F 100 % Wilderness	Alt G RPA 1985	Alt H PNV
1. Wilderness-Designated and Recommended	344.9	135.1	1248.7	727.8	441.2	346.6	2127.3	1483.1	1599.3
2. Minimum Level					1062.5				1.4
3. Intensive Wildlife and Dispersed Recreation		1958.7	1273.6	1420.5	432.9	2104.7	985.6	457.6	969.3
4. Stewardship Wildlife, Range, and Recreation	2499.7	260.1	530.7	243.8	687.0	96.4	44.0	131.7	59.2
5. Market Opportunities		475.8		591.2	488.5	73.1	14.9	905.9	21.7
6. Wild Horses, Wildlife, and Dispersed Recreation	0	298.2	118.7	56.6	62.3	363.6	0	13.9	186.0
7. Further Planning	191.1								
8. Intensive Dispersed Recreation Wildlife, and Current Developed Recreation									335.8
9. Moderate Recreation, Wildlife, and Range	121.0	13.1			13.1				
10. Moderate Timber and Range	25.0			13.9		25.0			
11. Market Opportunities and Developed Recreation		140.7		87.9		162.3		179.5	

Management Area Prescription

1. Wilderness - Designated and Recommended - This prescription (Rx) is designed to manage the established and recommended Wilderness Area to meet objectives and intent of the Wilderness Act (GOAL 6 in FORPLAN).
2. Minimum Level - This Rx is designed to protect minimum soil and water value and to protect public safety. Minimum level of Management (GOAL 1 in FORPLAN).
3. Intensive Wildlife and Dispersed Recreation - This Rx emphasizes the amenity values of Wildlife and Dispersed Recreation (GOAL 4 in FORPLAN).
4. Stewardship Wildlife, Range and Recreation - This Rx is a maintenance level program. The level is close to current level Management (GOAL 3 in FORPLAN).
5. Market Opportunities - Rx emphasizes Timber/Range programs (GOAL 5 in FORPLAN).
6. Wildhorses, Wildlife and Dispersed Recreation - Rx is similiar to Rx 3 except emphasizes Wildhorse Management in the areas of significant wildhorse populations (GOAL 4 in FORPLAN).
7. Further Planning - Rx to describe Further Planning Status of Current Program (No Action) - emphasis is to protect wilderness option in selected areas until a decision can be made (GOAL 6 in FORPLAN).
8. Intensive Dispersed Recreation, Wildlife, and Current Developed Recreation - Rx is similiar to Rx 3 except it applies to heavily developed Recreation Areas on the Forest. Emphasis is dispersed Recreation and Wildlife while maintaining developed recreation at current levels (GOAL 4 in FORPLAN).
9. Moderate Recreation, Wildlife, and Range - Rx describes Current Level Program. Maintenance level emphasis on Wildlife, Range, Developed and Dispersed Recreation (GOAL 2 in FORPLAN).
10. Moderate Timber and Range - Rx emphasizes Timber/Range at moderate level of Management intensity (GOAL 5 in FORPLAN).
11. Market Opportunities and Developed Recreation - This Rx emphasizes Developed Recreation, Range and Timber with primary emphasis on Recreation (GOAL 5 in FORPLAN).

PROCESS FOR YIELD COEFFICIENT DEVELOPMENT

Timber

The last field timber inventory for the Toiyabe National Forest was done in 1966. For the forest planning effort a new field inventory was initiated. In 1981, the pre-inventory stratification was completed by Region 4's Inventory Team. This stratification determined acreage by species types. The actual field inventory to produce data needed for yield table development has not yet been completed. The Toiyabe then attempted to use existing data from stand examinations, and Stage's Prognosis Model to develop yields for various management schemes. Stage's Model could not be calibrated to the sites found on the Toiyabe. Sites similar to the Toiyabe are found on the Tahoe and Stanislas National Forests. They have recent data from field inventories, and had already produced yield information for different management schemes applied to existing and regenerated (managed) stands. The Tahoe and Stanislas timber yield information that matched the Toiyabe sites and species were compared to the yields shown from the 1966 Toiyabe inventory. The yields correlated enough to allow use of the Tahoe and Stanislas yield information to develop coefficients for the Toiyabe's FORPLAN Model. Both the Tahoe and Stanislas National Forests used RAMPREP to develop their yield information. The Toiyabe used linear regression to fill in missing data in yield information. Coefficients were developed for each species type. Within each species, different yields were developed for existing stand and regenerated (or fully managed) stands. Different yields were also developed for different thinning schemes.

Yield coefficients for other timber products were developed from sales data, experienced yield information, research papers, and estimation.

Land Lines

Land line yields to support timber are based on historic averages and modified to reflect site specific conditions. Land line yields to support lands are based on historic averages.

Roads

Arterial and collector road yields are based on existing transportation system road density for multi-purpose roads. Arterial, collector and local road yields to accomplish timber harvest are based on historic averages from timber sale contracts and sales on the 10 year timber action plan. Local road yields for mineral development activities are based on existing transportation system road density.

Range

On an allotment by allotment basis, a list of all activities which fell within the framework (standards & guidelines) of each prescription was assembled. Utilizing this list of activities, by prescription, the range conservationist was able to project corresponding outputs over time. These outputs were then expressed in terms of AUMs per suitable acre, and entered into FORPLAN, by allotment and prescription.

Watershed

Estimated water yields, excluding water increase due to timber harvesting, that met state standards were entered into FORPLAN by analysis area. Water yield outputs were based on estimated total unit yield with no changes by prescription (goal). These were displayed as Thousand Acre Feet (M Ac. Ft.) per year, and estimated from stream guage data and a variety of water resource publications.

The acres of soil and water improvement were used to represent the acres of improved watershed condition. The acres in need of treatment by analysis area and prescription was provided by the Forest's watershed condition inventory.

These two soil and water output coefficients were the most meaningful, and therefore, the only values displayed in the Draft Environmental Impact Statement and the Plan. An example would be water increase due to timber harvesting which was insignificant, and therefore not displayed.

Developed Recreation

Public developed recreation site use was derived by multiplying the physical capacity (design capacity) of each developed recreation facility by the managed season (days open for use). These figures were converted from "PAOT Days" to "Recreation Visitor-Days" (RVDs). Design capacities were based on the inventory from the "Recreation Information Management System (RIM) of existing facilities, and staff estimates of the design capacity of future developed sites.

Dispersed Recreation

Dispersed recreation yields were derived from calculating the capacity by ROS Class, and keying in on dominant activities within an ROS Class. PAOTs were converted to RVDs/acre/year by taking into consideration the pattern of use (weekday versus weekend use), the percent of ground use based on professional judgement, and the Regional Activity Duration Averages. The recreation specialist calculated the amount of dispersed recreation opportunities available under different management senerios (prescriptions).

Wilderness

The same philosophy and approach as dispersed recreation was used in calculating the wilderness yield coefficients.

Minerals

The acres disturbed and acres reclaimed from mineral operations, and the numbers of mineral leases and plans were derived from historical data. Projections into the future were based on known mineral potential.

Lands

Land acquisition and adjustment yields were based on the historical attainment adjusted to the future yields by professional judgement of the Forest Reality Officer.

Special use permit yields were based on actual use as obtained from the Forest LUR's report.

Wildlife

Total Management Indicator Species (MIS) numbers represent deer only, and are equal to the number reported by the Forest in the annual wildlife report. Deer numbers come directly from the state wildlife agencies in California and Nevada. Other wildlife and fish numbers, displayed in the Draft Environmental Impact Statement (DEIS), are based on data supplied by the Nevada Department of Wildlife (NDF), California Fish and Game, and various technical documents.

Fire

Records of person caused fires from 1958 to 1983 were plotted. This trend, uncorrected for annual fire-weather variations, was analyzed by staff using the TI-55 trend analysis program. The trend analysis line was projected into the outyears and used as the basis for deriving fire occurrence at different levels and mixes of fire managements. Deviations up or down from the trend line were determined through staff consultation, and professional judgement.

See the process records located in the Supervisor's Office for details on the individual resource yield coefficient developement.

ECONOMIC EFFICIENCY ANALYSIS

NET PUBLIC BENEFIT

Net public benefit is an expression used to signify the overall long-term value to the nation of all yields and positive effects (benefits), less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index, such as present net value (PNV).

Conceptually (in land and resource management planning), net public benefits are viewed as PNV plus the value of non-priced benefits. Non-priced benefits include items such as threatened and endangered species maintenance or enhancement, natural or scenic areas, cultural resource site protection, visual quality in excess of minimum management requirements and increased plant or animal diversity.

There are other benefits or effects which are related to net public benefits and the concern for National Forest policy and management. These include local income, jobs, economic developments, impact on taxpayers, price effects on consumers of forest products and other producers of forest-related products, 25% returns to counties and distribution of benefits to specific users of National Forest products or activities. All these are distributive welfare effects which impact National Forest production and are the object of national policy issues which have been discussed by the Administration and Congress. Because these are distributive effects, they are essentially questions of equity rather than efficiency. They involve question of whom should get benefits and who pays the costs. They cannot be assessed in the context of the efficiency criteria associated with PNV.

PRESENT NET VALUE

Present Net Value (PNV) is the difference between the discounted values (benefits) of all resource yields to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area. Resource yields which were valued in the analysis were recreation (includes developed recreational, dispersed recreation and wilderness use), wildlife, timber, water,[1] fuelwood, Pinyon Pine nuts, Posts and poles, and Christmas Trees.

PNV is one important component of net public benefits because it provides a useful means of structuring a definition of the ways in which alternatives differ. Alternatives are designed to achieve their goals and objectives for priced yields in a manner that maximimizes the present value of benefits (PVB) minus the present value of costs (PVC) while meeting all specific constraints and objectives from non-priced yields.

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[1] Water yield increase was valued in FORPLAN, but the output was insignificant, therefore, it was not displayed in the Draft Environmental Impact Statement.

ROLE IN PROCESS AND RELIABILITY OF ESTIMATES

In recent years, the Federal government has become increasingly aware of and comitted to economic efficiency of Federal actions. The NFMA Regulations, ensuing Washington Office and Department direction, reflect the idea that the Forest Service should consider economic efficiency in devloping and choosing between Forest Plan alternatives. This section describes how Region 4 Forests will comply with the direction as well as to point out some traps to avoid when dealing with economic efficiency measures in the Forest planning process.

The regulations specifiy that "each alternative shall represent to the extent practicable the most cost-efficient combinations of management prescriptions examined that can meet the objectives established in the alternatives." (36 CFR 219.12(f)(8). A prgram is said to cost-efficient if it maximized present net value subject to achieving specified levels of outputs and inputs (36 CFR 219.3). In Region 4, we will respond to this by:

1. Maximizing PNV in FORPLAN. This will provide the levels of priced outputs in FORPLAN at an "efficient" point, given the objectives of the alternative as reflected in the model.

2. Using PNV as one criterion for chosing prescriptions or activities not incorporated in the FORPLAN model (but which have an established benefit value); e.g., campground development, wildlife and fish projects, etc.

3. Using east cost as one criterion in choosing precriptions or activities not incorporated in the FORPLAN model which do no have an established benefit model; e.g., habitat improvement activities to maintain threatened and endangered species, levels of campground maintenance, etc.

Forest analysts and decisionmakers should be cognizant, however, that the economic efficiency analysis will not provide information that should be weighted too heavily in the decision process. PNV is often overstated as a decision criterion for two reasons:

1. Forest alternatives are described by a variety of factors. Included are activities, outputs, environmental effects, costs, benefits, PNV, etc. If PNV captured in their entirety all costs and benefits associated with each and every alternative, then the alternative with the highest PNV would be, by definition, the "economically efficient" alternative.

   In practice, we simulate a variety of alternatives, each representing a unique way to resolve identified issues and concerns. When comparing two alternatives, we should be careful to compare the alternatives, each considered as whole and not focus our attention on any single factor, such as PNV. Even though each alternative has a different PNV, all alternatives are defined to be "cost efficient." We cannot determne the goodness or badness of an alternative in an economic sense because all are "cost Efficient." Since not all outputs are valued in Forest planning, we do not have enough information to say anything about the economic efficiency as defined in FSM 1970.5.

2. **Cost efficiency measure developed in the planning porcess (most notably PNV) may not be reiable. That is, there is an element of uncertainty associated with the stated PNV for any alternative. The uncertainty may be due to any of the following:**

   a. Not all outputs are explicitly valued; e.g., visual quality, maintenance of threatened and endangered species, minimizing negative impacts on local economies, etc. These outputs are often constrained to s specified level and are therefore achieved independent of the PNV calculation.

   b. Some priced outputs may also be fixed; that is, specified as constraints.

   c. Estimation techniques for valuing goods may not be accurate.

   d. Values for nonmarket goods provided by RPA often reflect national averages. Local values may differ substantially.

   e. Quality differences between priced nonmarket outputs typically are not valued explicitly; e.g., congestion differentials are not often considered for recreation.

   f. Demand curves for priced outputs may not be identifiable at the Forest level.

   g. Relationships between some Forest outputs are not well understood; e.g., anadromous fish spawning habitat capability to RVD's to dollars.

   h. Assumptions about real price and cost increases may not be accurate for any given outputs and/or consistent between outputs.

The uncertainty associated with the output and activity estimation is magnified by the uncertainty associated with estimating related economic parameters, rendering the PNV estimate less reliable than the estimates associated with the activities and outputs themselves. Therefore, we should use discretion in weighing PNV heavily in our evaluation of alternatives. However, all comparisons should note the relative reliability of the measure being compared (PNV, MMBF, AUM, number deer, etc.).

PRICED YIELD PARAMETERS USED IN PRESENT NET VALUE

Interest Rates

The economic analysis was conducted using a 4% discount factor for all Benchmarks and Alternatives during the 200-year planning horizon. A 7.125% discount factor was also used on all alternatives. The results are found in Table B-23.

Demand Analysis

For most resource outputs, it is reasonable to assume that price does not vary with Forest output levels. The only downward sloping demand curves that could be used in Land Management Planning are those associated with Wildlife/Fish, and other RVD's. However, the best practical approach, and the one used in FORPLAN, is to approximate the demand curves for these various types of RVD's by one-step demand curves. Specifically, price is assumed to be constant out to the projected use level, and zero for output levels beyond that. Both prices and projected use levels will vary over time. Methods for projecting recreation use are discussed in FSM 1909.12, Chapter 30.

Base Year Dollars

The base year for yields, benefits and budgets is in 1978 dollars. All budgets need to be adjusted for inflation to reflect the actual cost in any given year. Inflation is not included in the discount rates, benefits and costs because (1) of the difficulty of estimating future inflation rates and (2) inflations would equally affect costs and prices.

COSTS

All Forest Service costs were estimated over the 200 year planning horizon for benchmarks and alternatives. Costs were developed by resource specialists in conjunction with developing standards and guidelines for management prescriptions. Resource specialists estimated costs for different management activities within various management prescriptions. These costs included expenditures necessary to produce both priced and non-priced yields. All costs are based on historic data and professional judgement. These costs approximate the minimum funds needed to achieve the standards and guidelines in any management prescription.

Costs dependent upon land distribution or production of resource yields were modeled in FORPLAN. These costs were entered into the economic tables, yield tables, or directly entered for the various management prescriptions. By requiring FORPLAN to maximize PNV, the most efficient level of Forest expenditures to achieve the goals and objectives of any benchmark or alternative could be estimated for the 200 year planning horizon. More detailed information on data sources and FORPLAN modeling procedures is contained in the process records.

There are three types of costs in the Toiyabe Plan:

(1) Forestwide costs are a part of every benchmark and alternative, and vary by the major thrust of that benchmark or alternative. These costs are entered into the FORPLAN model by using a dummy analysis area. Therefore, given activities and their costs occur regardless of the management prescriptions chosen by FORPLAN. Forestwide costs do not effect land assignment, except when a budget constraint is in effect. These costs may include: road planning, preconstruction, construction and maintenance not associated with timber harvesting; facility preconstruction, construction, and maintenance; HRP programs; land management planning; law enforcement-coop; and general administration.

(2) Minimum management requirement costs reflect the cost of activities necessary to meet legal requirements to insure public safety and environmental protection. These costs are incorporated into all the mangement prescriptions and calculated in FORPLAN.

(3) Variable costs are the costs of Forest Service management practices that vary in amount and timing as well as in response to different land types and management objectives. Each management prescription in the FORPLAN model has a unique set of variable costs.

The variable, forestwide, and minimum management requirement costs are included in the Toiyabe FORPLAN model. Variable and minimum requirement costs influence land assignment and scheduling.

None of the costs for managing the Toiyabe National Forest are expected to increase above inflation rates. (Thus, there will be no anticipated increase in real costs). The average unit costs of management practices can vary according to standards and guidelines.

BENEFITS

Benefits in FORPLAN

The Toiyabe FORPLAN model contains 20 priced outputs. These are devloped site use-public, developed site use-private, dispersed use, dispersed use hunting, dispersed use fishing, wilderness use, wilderness use hunting, wilderness use fishing, WFUD increase by improvement, livestock permitted use, Jeffrey Pine sawtimber, mixed conifer sawtimber, lodgepole pine sawtimber, firewood from precommercial thins, softwood roundwood, pinyon pine nuts, Christmas trees, posts & poles, pinyon fuelwood, and water yield increase.[1]

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[1] Water yield increase was valued in FORPLAN, but the output was insignificant, therefore, it was not displayed in the Draft Environmental Impact Statement (DEIS).

The following procedure was used for determining Toiyabe Timber Values:

TABLE B-4 TIMBER VALUES IN DE-FORPLAN
(TOIYABE NF)

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VALUE FOR JEFFREY PINE - PER MBF

(Tractor Logging - <30% slope)

MINIMUM DIAMETER	MAXIMUM DIAMETER	VALUE PER MBF
0.00	16.00	63.24
16.00	20.00	64.07
20.00	24.00	69.50
24.00	28.00	71.38
28.00	40.00	77.86

(Aerial Logging - >30% slope)

MINIMUM DIAMETER	MAXIMUM DIAMETER	VALUE PER MBF
0.00	16.00	24.33
16.00	20.00	25.16
20.00	24.00	30.59
24.00	28.00	32.47
28.00	40.00	38.95

VALUE FOR MIXED CONIFER - PER MBF

(Tractor Logging - <30% slope)

MINIMUM DIAMETER	MAXIMUM DIAMETER	VALUE PER MBF
0.00	16.00	45.59
16.00	20.00	46.18
20.00	24.00	50.04
24.00	28.00	51.38
28.00	40.00	55.98

(Aerial Logging - >30% slope)

MINIMUM DIAMETER	MAXIMUM DIAMETER	VALUE PER MBF
0.00	16.00	6.68
16.00	20.00	7.27
20.00	24.00	11.13
24.00	28.00	12.47
28.00	40.00	17.07

VALUE FOR LODGEPOLE PINE - PER MBF

(Tractor Logging - <30% slope)

MINIMUM DIAMETER	MAXIMUM DIAMETER	VALUE PER MBF
0.00	16.00	22.43
16.00	20.00	22.72
20.00	24.00	24.64
24.00	28.00	25.31
28.00	40.00	27.60

(Aerial Logging - >30% slope)

MINIMUM DIAMETER	MAXIMUM DIAMETER	VALUE PER MBF
0.00	16.00	-16.48
16.00	20.00	-16.19
20.00	24.00	-14.27
24.00	28.00	-13.60
28.00	40.00	-11.31

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DOCUMENTATION:

The following procedure was used for determining Toiyabe National Forest's timber values:

Done by: Doug Sonneman, Forest Economist, 01/11/81
Reviewed by Barbara Mckinnon, Zone Economist, 04/21/82
Corrected by Lonnie Kirby, Timber Mgt Assistant, 06/21/83
Corrected by Bill Levere, Planning Analyst. 01/26/84

1) All dollar values have been converted to first quarter 1978 dollars using the index provided by the Regional Office (see computer file-ECNPB*values. Deflator)

2) The stumpage value is the base value from which all calculations were made.

3) From the appraisal forms in file 1970, Economic and Social Analysis, 1970-1981 Timber Sales, stumpage value is listed species (line __ of apriaisal form).

4) Increase in bid is determined. Stat high bid minus advertised bid (line 43) equals bid increase.

5) This bid increase is divided by the number of board feet to get the increase per MBF.

We realize that an increase in bid may be based by the buyer on the potential value of one of four timber species. We cannot determine to which species this bid increase is directed so an average per MBG for all species in that sale was determined. This is somewhat inaccurate but is the best the data will allow.

6) The Dog Creek sale data is not included in the average value as it is a helicopter sale (the only one) and would create a problem as the data is an average for a tractor logging system. The data however, is provided.

7) The Chango Lake Sale Data is not included in the average value as it is a timber for land exchange which did not enter the market. Price was set, the others were bid in the market. The data however, is provided.

8) The Badenaugh Sale data is only included as to how much of each species was cut to show aggregate percentage by specie. No cost data of any kind was available to determine the value.

9) All volume is based on amount sold not on amount cut. All values are in constant dollars at time of bid, not when actually paid.

10) Value is based on total 1978 dollars by specie, divided by total amount cut (MBF) for the time period.

11) Data are based on when the contract was sold, for sales sold from 1970 - 1981 inclusive, not when the timber was actually cut.

TABLE B-5 SUMMARY OF TIMBER VALUE RESULTS

SPECIE	MBF AMOUNT SOLD(A) (1970-1981)	1978 DOLLARS	AVERAGE VALUE PER MBF
JP	18,841	1,286,479.58	68.25
RF/WF	21,037	678,952.15	33.09
WP	3,884	539,638.62	140.38
LP	4,577	110,571.79	24.20
MH	2,237	97,264.67	43.48
IC	368	22,783.02	61.91

(A) Excludes Dog Creek, Chango Lake, and Badenaugh Sales.

DATA

SALE	SPECIES	STUMPAGE VALUE	AVERAGE INCREASE IN BID	STUMPAGE VALUE + BID INCREASE	CONVERSION FACTOR TO 1978 $$	MBF	1978 $$ VALUE
WILLOW	JP	59.68	22.14	81.82	130.00	1207	62.94
1981	RF/WF	-68.87		-46.73		1478	-35.95
	WP	160.87		183.01		840	140.78
	LP	-80.23		-58.09		968	-44.68
	MH	-80.23		-58.09		36	-44.68
BLUE	RF	-61.86	91.64	29.78	120.94	1801	24.62
LAKES	WP	46.93		138.57		334	114.58
1980	LP	-60.66		30.98		659	25.62
	MH	-60.66		30.98		563	25.62
DOG PATCH	JP	36.04	12.45	48.49	95.85	1431	50.59
PURDY CREEK	JP	.20	94.11	94.31	113.32	1247	83.22
PICKETTS	RF	15.59	0.00	15.59	111.21	700	14.02
PEAK	WP	145.99		145.99		250	131.27
	LP	16.05		16.05		100	14.43
	MH	16.05		16.05		23	14.43
HAWKINS	WP	92.78	61.31	154.09	97.12	580	158.66
CREEK	RF	14.54		75.85		1870	78.10
	LP	14.54		75.85		670	78.10
HIGH	JP	64.35	64.83	129.18	95.85	575	134.77
PEAK	WF	-0.25		64.58		1512	67.38
SUMMIT	JP	73.43	0.01	73.44	95.85	4437	76.62
II	WF	23.57		23.58		379	24.60
	IC	97.41		97.42		83	101.64

DATA

SALE	SPECIES	STUMPAGE VALUE	AVERAGE INCREASE IN BID	STUMPAGE VALUE + BID INCREASE	CONVERSION FACTOR TO 1978 $$	MBF	1978 $$ VALUE
LOG GRADE 2	JP	51.54	0.70	52.24	89.63	1877	58.62
	WF	16.46		17.16		63	19.15
NORTH BRANCH	JP	30.26	0.32	30.58	89.63	3387	34.12
	WF	6.33		6.65		884	7.42
	IC	44.80		45.12		285	50.34
FORESTDALE CREEK	JP	75.75	0.14	75.89	89.63	320	84.67
	RF/WF	11.48		11.62		2074	12.96
	MH	11.48		11.62		65	12.96
	LP	11.48		11.62		560	12.96
LEVIATHAN MINE	JP	30.38	0.00	30.38	82.52	185	36.82
	WF	-1.28		-1.28		1086	-1.55
BREWERS MINE	JP	93.89	0.00	93.89	71.01	1180	132.22
	LP	67.22		67.22		210	94.66
	WF/RF	67.22		67.22		200	94.66
DEEP CREEK #2	WP	90.77	0.08	90.85	70.01	300	127.94
	WF/RF/MH	70.04		70.12		2330	98.75
	LP	70.04		70.12		85	98.75
TAMARACK LAKE	WP	88.73	31.35	120.08	68.12	1070	176.27
	RF	10.49		41.84		1970	61.42
	MH	10.49		41.84		1330	61.42
	LP	10.49		41.84		550	61.42
RAYMOND MEADOWS	WP	43.09	0.13	43.22	68.12	330	63.45
	RF	4.78		4.91		710	7.21
	MH	4.78		4.91		220	7.21
	LP	4.78		4.91		230	7.21
BALD MTN.	JP/PP	7.41	19.02	26.43	68.12	415	38.80
	LP	-2.55		16.47		210	24.18
CHARITY VALLEY	WP	54.36	0.91	55.27	68.12	100	55.75
	RF	16.05		16.96		650	24.90
	LP	16.05		16.96		290	24.90
BURNSIDE ROAD SALVAGE	WP	35.07	2.91	37.98	68.12	40	55.75
	RF	-3.24		-0.33		220	-0.48
	LP	-3.24		-0.33		20	-0.48
FREDRICKSBURG	JP/PP	28.88	21.24	50.12	65.13	2260	76.95
	WF/RF	1.35		22.59		200	34.68

DATA

SALE	SPECIES	STUMPAGE VALUE	AVERAGE INCREASE IN BID	STUMPAGE VALUE + BID INCREASE	CONVERSION FACTOR TO 1978 $$	MBF	1978 $$ VALUE
PICKETT PEAK	JP/PP	18.31	3.70	22.01	62.02	320	35.49
	WF/RF	-1.47		2.23		2380	3.60
	LP	-1.47		2.23		25	3.60
BADENAUGH	WP					600	
	LP					100	

AVERAGE VALUE PER MBF BY SPECIES

SPECIES	1978 VALUE		MBF		TOTAL VALUE	AVEARAGE VALUE PER MBF
WP	140.78	X	840	=	118,255.20	
	114.58	X	334	=	38,269.72	
	131.27	X	250	=	32,817.50	
	158.66	X	580	=	92,022.80	
	127.94	X	300	=	38,382.00	
	176.27	X	1070	=	188,608.90	
	63.45	X	330	=	20,938.50	
	81.14	X	100	=	8,114.00	
	55.75	X	40	=	2,230.00	
			3844		539,638.62	$140.38/MBF
LP	-44.68	X	968	=	-43,250.24	
	25.62	X	659	=	16,883.58	
	14.43	X	100	=	1,443.00	
	78.10	X	670	=	52,327.00	
	94.66	X	210	=	19,878.60	
	98.75	X	85	=	8,393.75	
	61.42	X	550	=	33,781.00	
	7.21	X	230	=	1,658.30	
	12.96	X	560	=	7,257.60	
	24.18	X	210	=	5,077.80	
	24.90	X	290	=	7,221.00	
	-0.48	X	20	=	-9.60	
	3.60	X	25	=	90.00	
			4577		110,751.99	$24.20/MBF

AVERAGE VALUE PER MBF BY SPECIES

SPECIES	1978 VALUE		MBF		TOTAL VALUE	AVEARAGE VALUE PER MBF
JP	62.94	X	1207	=	75,968.58	
	50.59	X	1431	=	72,394.29	
	83.22	X	1247	=	103,775.34	
	76.62	X	4437	=	339,962.94	
	58.28	X	1877	=	109,391.59	
	134.77	X	575	=	77,492.75	
	34.12	X	3387	=	115,564.44	
	84.67	X	320	=	27,094.40	
	36.82	X	185	=	6,811.70	
	132.22	X	1180	=	156,019.60	
	38.80	X	415	=	16,102.00	
	76.95	X	2260	=	173,907.00	
	35.49	X	320	=	11,356.80	
			18841		1,285,841.40	$68.25/MBF
RF/WF	-35.95	X	1478	=	-53,134.10	
	24.62	X	1801	=	44,340.62	
	14.02	X	700	=	9,814.00	
	67.38	X	1512	=	101,878.56	
	24.60	X	379	=	9,323.40	
	17.15	X	63	=	1,206.45	
	78.10	X	1870	=	146,047.00	
	12.96	X	2074	=	26,879.04	
	-1.55	X	1086	=	-1,683.30	
	94.66	X	200	=	18,932.00	
	98.75	X	2330	=	230,087.50	
	61.42	X	1970	=	120,997.40	
	7.21	X	710	=	5,119.10	
	7.42	X	884	=	6,559.28	
	24.90	X	650	=	16,185.00	
	-0.48	X	220	=	-105.60	
	34.68	X	200	=	4,936.00	
	3.60	X	2380	=	8,568.00	
	0.26	X	330	=	137.80	
			21037		696,088.15	$33.09/MBF
MH	-44.68	X	36	=	-1,608.48	
	25.62	X	563	=	14,424.06	
	14.43	X	23	=	331.89	
	12.96	X	65	=	842.40	
	61.42	X	1330	=	81,688.60	
	7.21	X	220	=	1,586.20	
			2237		97,264.67	$43.48/MBF

AVERAGE VALUE PER MBF BY SPECIES

SPECIES	1978 VALUE		MBF		TOTAL VALUE	AVEARAGE VALUE PER MBF
IC	101.64	X	83	=	8,436.12	
	50.34	X	285	=	14,346.90	
			368		22,783.02	$61.91/MBF

MIXED SPECIES

JP	68.28	X	18841	=	1,286,479.58	
*RF/WF	32.27	X	21037	=	678,952.15	
*WP	140.38	X	3844	=	539,638.62	
LP	24.16	X	4577	=	110,571.79	
*MH	43.48	X	2237	=	91,264.67	
IC	61.91	X	368	=	22,783.02	
			50904		2,729,689.83	$53.62/MBF

*Use for species mix % for mixed Conifer strata.

ESTIMATED AVERAGE VALUE FOR MIXED CONIFER STRATA

SPECIES	MBF	WEIGHTED AVERAGE SPECIES MIX		INDIVIDUAL SPECIES VALUE/MBF	
RF/WF	21037	77.58%	X	$ 33.09	= $25.67
WP	3844	14.17%	X	$140.38	= $19.89
MH	2237	8.25%	X	$ 43.48	= $ 3.59
	27118	100.00%			$49.15/MBF

JEFFREY PINE STUMPAGE VALUE + BID INCREASE

$68.25 (A) 1978 DOLLARS

ESTIMATE OF VALUE BY DBH (B):

DBH	VALUE/MBF
8-16	63.24
16-20	64.07
20-24	69.50
24-28	71.38
28-40	77.86

MIXED CONIFER STUMPAGE VALUE + BID INCREASE

$49.15 (A)   1978 DOLLARS

ESTIMATE OF VALUE BY DBH (B):

DBH	VALUE/MBF
8-16	45.59
16-20	46.18
20-24	50.04
24-28	51.38
28-40	55.98

LODGEPOLE PINE STUMPAGE VALUE + BID INCREASE

$24.20 (A)   1978 DOLLARS

ESTIMATE OF VALUE BY DBH (B):

DBH	VALUE/MBF
8-16	22.43
16-20	22.72
20-24	24.64
24-28	25.31
28-40	27.60

(A) Average value based on Doug Sonneman's economic analysis of Toiyabe timber values, 01/11/81 as corrected 06/21/83.

(B) Based upon % study of R% Estimated Sales Realization Tables found in R5 FSH 2409.22, 41.1__4 AND. 15.

AERIAL LOGGING VS. TRACTOR LOGGING

For areas that need special logging equipment (cable or helicopter) an additional cost was subtracted from the tractor logging value to make an allowance for this type of logging. This cost has been estimated by using Region 5 average logging costs contained in FSH 2409.22 Timber Appraisal Handbook. The difference of $38.91 (1978 dollars) represents the average additional cost of cable or helicopter logging for use in FORPLEN. It must be emphasized that this difference is only an average and is only an estimate. The Toiyabe Nationa Forest cable logging costs should be higher than Region 5 cable logging costs due to higher move in-out costs and having to handle more pieces for the same volume removed. Also, due to the smaller material, helicopter logging should be less expensive than Region 5 average costs because a very small (far less expensive to operate) helicopter can be used.

The following values were derived using information in ECONPB*VALUES based on the 1980 RPA values: developed recreation use (public sector), developed reacreation use (private & other public sector), dispersed recreation use, dispersed hunting used, dispersed fishing use, wilderness use, wilderness hunting use, wilderness fishing use, and permitted grazing use. Values from years 1980 to the end of the planning horizon are the same (straight-lined out).

The cord value was derived from the market price of $10.00 per cord of fuelwood sold from the Toiyabe National Forest. The softwood roundwood and the pinyon fuelwood values were figured by converting the cord value to a value per MCF.

The value for Christmas trees, posts and poles, and pinyon nuts were obtained from the Forest Service Manual (FSM 2430).

TABLE B-6 Price of Outputs for PNV Calculation

Source	Resource	Out Put Measure	Value or Prices
RPA	Developed Site-Public	RVD	3.00
RPA	Developed Site Private	RVD	3.50
RPA	Developed	RVD	3.00
R-4	Hunting	WFUD	24.51
R-4	Fishing	WFUD	17.85
R-4	Wilderness	RVD	8.00
R-4	Wilderness-Hunting	WFUD	24.51
R-4	Wilderness-Fishing	WFUD	17.85
R-4	Improvement measure	WFUD	20.05
R-4	Range permitted use	AUM	13.12
R-4	Pinyon Pine nuts	Pounds	.25
R-4	Christmas Trees	Tree	1.00
R-4	Post and Poles	Pole	2.00
R-4	Pinyon Fuelwoods	MCF	100.00
R-4	Softwood Roundwood	MCF	125.00
R-4	Firewood	Cord	10.00

TABLE B-6 (cont.) Price of Outputs for PNV Calculation

Source	Resource	Out Put Measure	Value or Prices
	TIMBER	MCFT	
	Jeffrey Pine <30% slope	16-40 inch DBH	63.25 to 77.86
	Jeffrey Pine >30% slope	16-40 inch DBH	24.30 to 38.95
	Mixed Conifer <30% slope	16-40 inch DBH	45.59 to 55.98
	Mixed Conifer >30% slope	16-40 inch DBH	6.68 to 17.07
	Lodge pole <30% slope	16-28 inch DBH	22.43 to 25.31
	Lodge pole >30% slope	16-28 inch DBH	-16.48 to -11.31

Benefits Outside FORPLAN

No benefits were calculated outside FORPLAN for inclusion in the Benchmarks or Alternatives.

Cut-Offs Due To Horizontal Demand Assumptions

A horizontal demand assumption was used to cut-off developed recreation opportunities, dispersed recreation opportunities, and wilderness opportunities. Any supply above the 1980 RPA levels plus 25% was not valued. Thus, any potential capacity above this level did not contribute to PNV or benefits. This constraint limits the effects of these resources on land management assignments beyond their cut-off.

SOCIAL AND ECONOMIC REPORT ANALYSIS

INTRODUCTION

The Forest Service has been directed by Congress to estimate the social effects of different Forest management alternatives under NFMA {36 CFR 219.5(g)} and NEPA (40 CFR 1508.14).

Forest Service land management activities affect the local, regional, and national economics in two ways. First, the flow of forest resource outputs from the management activities influences market transactions at the local, regional, and national levels. Secondly, the Forest Service purchases goods or services from the local or regional economy in order to conduct these management activities, and Forest Service employees use their salaries to buy goods and services. The relationships between the Forest and the local or regional economy affect employment, income, and state and local government revenues. These impacts may further affect the social well being of the people living in the impact area.

This analysis, using a regional input/output model estimates changes in employment, income, and population brought on by different forest management alternatives. The analysis also estimates whether or not these changes will affect such social variables as lifestyles, attitudes, beliefs, values, social organizations and population and land use within the impact area.

DETERMINATION OF IMPACT AREA (ZOI)

It was determined that the primary Zone of Influence (ZOI) for the Toiyabe National Forest consists of Carson City (Ormsby), Clark, Douglas, Eureka, Lander, Lyon, Mineral, Nye, and Washoe counties in Nevada; and Alpine, Mono, and Sierra counties in California. This area was designated as the primary Zone of Influence because the location of the National Forest lies within these county boundaries, and because they would receive the direct impacts from the Forest's management activities and outputs.

A secondary Zone of Influence includes Churchill, Esmeralda, and Storey counties in Nevada, and the Central/Southern California area. These areas, however, are not directly effected by the actions of the Toiyabe, although the Toiyabe does provide recreational opportunities and fuelwood for many residents in these areas.

ECONOMIC IMPACT MODEL

Introduction:

An input/output economic model (IMPLAN) was developed and used in response to several of the 36 CFR 219 regulations dealing with socio-economic impact analysis.

IMPLAN uses economic input/output analysis to develop interindustry models that assist in estimation of local or regional impacts from various land management programs.

Economic input/output (I/O) analysis is widely accepted as a procedure for describing the structural interdependencies of regional economic or impact areas. It also serves as a short term predictive model for evaluating the effects of shifts in exogenous demand (changes in Forest outputs and activities) on regional or local economies.

I/O analysis is based upon the interdependence of production and consumption sectors in the impact area. Industries must purchase imports from the industries, as well as primary sources like natural resources, for use in the production of outputs which are sold either to other industries or to final consumers. These flows of inputs and outputs are traced to show linkages between the industries composing a regional or local economy. An input/output matrix describing these linkages can be transformed into a system of simultaneous equations which permit the prediction of economic effects that would result from a change in exogenous demand (Forest outputs and activities). The use of these simultaneous equations can indicate changes in employment, income, and population in the impact area.

Input/Output analysis is based on a number of assumptions that limit the accuracy of projections. Therefore the numbers presented are relative indicators rather than absolute projections.

IMPLAN Data Base

The data base for the IMPLAN model consists of two major parts: 1) a national level technology matrix and 2) estimates of sectorial (466 sectors) activity for final demand, final payments, gross output, and employment on a county by county basis.

The national technology matrix denotes restorial production functions which are used to estimate local purchases and sales. This matrix is based on a 1972 Commerce Department I/O model converted to an industry by industry basis and updated to 1977 by relative price changes and RAS procedure.

1977 estimates of the 466 industrial sectors on a state and county level was developed by Engineering Economics Associates of Berkeley, California.

By using the national technology matrix and the estimates of sectorial activities on a county by county basis, more localized production functions are developed to estimate local purchases and sales.

Impact Area Models Derived from IMPLAN

For the purpose of performing the economic impact analysis on the identified primary Zone of Influence, it was necessary to develop four sub models from the IMPLAN model. This would allow for localized projections of employment, income, and population brought on by changes in Forest outputs and activities (final demand).

The first model, Central Nevada, includes the counties of Eureka, Lander and Nye. This area is typical of the Basin/Ranges landform in Nevada, and grazing and mining are the principal activities that may effect the social variables. For this model, similiar industrial sectors were aggregated so that there could be a clearer understanding of the impacts. The SMASH program for IMPLAN aggregated 57 industrial sectors to 35. Data within the REGION or ALTER programs were not modified for this model.

The second model, Las Vegas, was constructed for Clark County. This is because the Mt. Charleston is such an isolated piece of Forest Service land and the outputs from this area have a very insignificant effect on the city of Las Vegas.

The SMASH program for IMPLAN aggregated 197 sectors to 48. Data within the REGION or ALTER programs were not modified for this model.

The third model, Northern Sierra, includes the counties of Carson City, Douglas, and Washoe in Nevada; and Alpine and Sierra in California. These counties were grouped together because this is where the majority of the sawtimber output occurs. Recreational use is also a significant output from this area. The fact that Reno and Carson City lie within this area, complicates the estimation of the effects since Forest Service outputs have a relatively insignificant effect on these cities. The smaller communities within this area may be significantly impacted. The SMASH program for IMPLAN aggregated 213 sectors to 49. Data within the REGION or ALTER programs were not modified for this model.

The fourth model, Southern Sierra, includes the counties of Lyon and Mineral in Nevada; and Mono in California. This was done because while this are has vegetation similar to the Northern Sierra area, very little sawtimber is harvested from this area, and recreational use is the primary output. The SMASH program for IMPLAN aggregated 75 sectors to 37. Data within the REGION or ALTER programs were not modified for this model.

FINAL DEMAND EXPENDITURES

The I/O model translates Forest outputs and activities into employment and income impacts. An intermediate step is the translation of outputs into final demand dollars. Final demand expenditures represent consumer's willingness to pay for finished goods derived from Forest outputs. Final demand expenditure data was estimated for those industrial sectors which would be directly affected by a change in a Forest output or activity.

For the IMPLAN sub models, expenditure data were developed for ten outputs produced from the Forest. These outputs are big game hunting, other wildlife, skiing, developed recreation, dispersed recreation, grazing, sawtimber, fishing, Forest Service purchases and Forest Service salaries. The final demand expenditures are based on dollars per unit of forest output which are linked to those industrial sectors where the direct expenditure takes place. The following final demand expenditures by sector, by output, (TABLE B-74 8, and 9) were used (in 1977 dollars):

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TABLE B-7

Sector	Skiing $/RVD	Camping $/RVD	Picnicking $/RVD	Disp. Motorized $/RVD
Livestock	0	0	0	0
Sawmills	0	0	0	0
Hotels & Lodging	14.03	.26	1.30	2.16
Eating & Drinking	12.25	0	0	4.45
Food & Kindred	0	1.65	3.20	2.45
Petroleum	1.83	1.00	2.96	2.53
Sporting Goods Manuf.	5.77	.50	2.70	.33
Amusement & Recreation	10.30	.03	0	.38
Wholesale Trade	1.67	.59	1.56	.68
Retail Trade	4.73	.90	2.64	.82
Auto Repair & Service	.09	.05	.15	.13

TABLE B-8

Sector	Disp Non-Motor $/RVD	Big Game Hunt $/WFUD	Nature Study $/WFUD	Sm. Game Hunt
Livestock	0	0	0	0
Sawmills	0	0	0	0
Hotels & Lodging	1.85	.52	5.21	.71
Eating & Drinking	3.80	1.09	1.46	.64
Food & Kindred*	2.52	2.13	.49	1.21
Petroleum	2.60	4.54	2.62	6.65
Sporting Goods Manuf.	1.34	2.34	.38	2.05
Amusement & Recreation	.60	2.71	.30	0
Wholesale Trade	.60	2.20	1.30	2.56
Retail Trade	.87	3.04	1.30	2.94
Auto Repair & Service	.13	.23	.13	.33

TABLE B-9

Sector	Sawtimber $/MBF	Cattle Grazing $/AUM	Sheep Grazing $/AUM	Fishing $/WFUD
Livestock	0	24.80	73.40	0
Sawmills	256.00	0	0	0
Hotels & Lodging	0	0	0	.84
Eating & Drinking	0	0	0	1.07
Food & Kindred*	0	0	0	1.17
Petroleum	0	0	0	2.52
Sporting Goods Manuf.	0	0	0	.66
Amusement & Recreation	0	0	0	.30
Wholesale Trade	0	0	0	1.05
Retail Trade	0	0	0	1.12
Auto Repair & Service	0	0	0	.13

*The number shown is the total expenditure among 46 actual industrial sectors. If only five of those 46 sectors exist within a local economy, only 5/46 of that expenditure is used. (The Central Nevada model had 0 sectors in Food and Kindred, the Las Vegas model had 15 sectors, the Northern Sierra model had 12 sectors and the Southern Sierra model had 2 sectors).

The following percentages (TABLE B-10) were used to determine weighted average final demand expenditures for various Forest outputs:

Table B-10

	Model Area			
Output	No. Sierra	So. Sierra	Cent. Nev.	Las Vegas
Dev. Recreation				
Camping	91%	97%	85%	56%
Picnicking	9%	3%	15%	44%
Disp. Recreation				
Disp. Motorized	62%	68%	20%	70%
Disp. Non-Motorized	38%	32%	80%	30%
Other Wildlife				
Sm. Game Hunt	85%	91%	76%	3%
Nature Study	15%	9%	24%	97%
Grazing				
Sheep Grazing	14.5%	44.8%	5.6%	0
Cattle Grazing	85.5%	55.2%	94.4%	0

The final demand expenditures were further refined by the assumption that for every dollar a resident spends, a non-resident spends $.25. Therefore a factor was developed to apply to all final demand estimates to compensate for this assumption. The equation used to determine the new final demand expenditures was:

$$\% R (E) + \% NR (.25E) = \{\% R + \% NR (.25)\}E$$

Where: % R = percent of use by residents
% NR = percent of use by non-residents
E = the final demand expenditure

In Northern Sierra, it was estimated that 90% of the use is by non-residents; in Southern Sierra, it was estimated that 95% of the use is by non-residents; in Central Nevada, it was estimated that 75% of the use is by non-residents; and in Las Vegas, it was estimated that 5% of the use is by non-residents.

Note: This adjustment was made for all final demand expenditures except those associated with grazing, sawtimber, and skiing. Skiing wasn't adjusted because the majority of the expenses involved with skiing occur in the area around the ski site, whether the user is a local or a non-resident.

TABLE B-11 Determination of Forest Outputs by Model Area

		IMPLAN MODEL			
IMPLAN Output	FORPLAN Output	Cent. Nev.	Las Vegas	No. Sierra	So. Sierra
	Total	15.1%	25.0%	18.8%	41.1%
Grazing	Permitted Use	55.7%		14.1%	30.2%
Sawtimber	Sawtimber			100%	
Fishing	Dispersed Fishing				
	Wilderness Fishing				
	Total	19.0%		10.0%	71.0%

ESTIMATED IMPACTS ON THE PRIMARY ZONE OF INFLUENCE

Chapter IV of the DEIS contains the estimated impacts of each alternative on employment, income, lifestyles, attitudes, beliefs and values, social organization, and population and land use.

Since the FORPLAN model didn't track the same outputs as the IMPLAN model needed, and since most of the outputs couldn't be disaggregated to the county groups, various percentages of outputs from the FORPLAN model were used in the IMPLAN models (TABLE B-12). These percentages were:

Table B-12

		IMPLAN MODEL			
IMPLAN Output	FORPLAN Output	Cent. Nev.	Las Vegas	No. Sierra	So.Sierra
F.S. Salary	Total Costs*	8.95%	4.45%	43.42%	7.31%
F.S. Purchases	Total Costs*	4.45%	2.95%	23.58%	4.89%
Big Game	Dispersed Hunt				
	Wilderness Hunt				
	Total	13.05%	.13%	14.10%	39.66%
Other Wildlife	Dispersed Hunt				
	Wilderness Hunt				
	Total	15.95%	4.27%	2.30%	10.54%
Skiing	Developed-Public				
	Developed-Private				
	Total		1.87%	2.52%	
Dev. Rec.	Developed-Public				
	Developed-Private				
	Total	11.30%	21.53%	20.38%	42.40%
Disp. Rec.	Dispersed Use				
	Wilderness Use				

* Costs used were Total Costs minus Haul Costs, Timber Purchaser Road Construction Costs and Timber Purchaser Road Reconstruction Costs.

ANALYSIS PRIOR TO DEVELOPMENT OF ALTERNATIVES

INTRODUCTION

This analysis process included compiling data (i.e., issues and concerns, demand projections, the current management situation, etc.), and using the FORPLAN model to process and/or develop information on Forest output production capability, economics, and resource interrelationships.

The major step prior to the development of alternatives was the Analysis of the Management Situation (AMS). The AMS describes the ability of the Forest to provide goods and services in response to society's demand. By using FORPLAN, the Toiyabe was able to determine the resource and economic boundaries (benchmarks) within which to formulate a broad range of alternatives. These Benchmark analyses were:

1. the minimum level management which would be needed to maintain the Forest,
2. the maximum present net value (PNV) based on established market price,
3. the maximum PNV including assigned values,
4. the maximum Wilderness potential,
5. the minimum Wilderness,
6. the current level management most likely to be implemented in the future,
7. the maximum timber potential,
8. the maximum range potential,
9. the maximum developed recreation potential, and
10. the maximum dispersed recreation potential.

DEVELOPMENT OF MINIMUM MANAGEMENT REQUIREMENTS (MMR's)

The legal minimum management requirements defined in the NFMA Regulations (36 CFR 219.27) are as follows:

1. Conserve soil and water resource productivity.
2. Minimize hazards from flood, wind, wildfire, erosion or other natural physical forces.
3. Prevent or reduce hazards and damage from pest organisms.
4. Protect riparian areas.
5. Maintain or enhance plant and animal diversity.
6. Provide fish and wildlife habitat needed to maintain viable populations.
7. Protect threatened and endangered species habitat.
8. Maintain wild horse and burros (as of 1971 levels).

The following displays additional requirements that are met by developing standards:

1. Provide for transportation and utility corridors.
2. Develop road design and construction guidelines and standards.
3. Provide for revegetation of temporary roads.
4. Maintain air quality.

Several methods were used to meet the minimum management requirements (MMR'S), and these include:

- specifying the management practices incorporated into the FORPLAN prescriptions,
- development of standards and guidelines for each prescription,
- development of a variety of prescriptions for each analysis area so a range of management options was available.

Modeling Constraints

The Toiyabe met the MMR's by the way FORPLAN prescriptions were built, and through the development of standards and guidelines. Therefore no modeling constraints were applied to FORPLAN runs to achieve the MMR's.

Conserve soil and water resource productivity. The forestwide standards and guidelines state that watershed improvement techniques will be used in all prescriptions to improve declining watershed conditions. However, the amount of improvement will vary by prescription. The watershed improvement techniques can be found in Forest Service Handbooks, and are incorporated into management prescriptions by requiring certain management practices. Soil productivity improvement is considered a part of watershed improvement. Incorporated into the FORPLAN model are slopes less than and greater than 30 percent, with tractor logging only occurring on those slopes less that 30 percent.

1. Minimize hazards from flood, wind, wildfire, erosion or other natural physical forces

The forestwide standards and guidelines incorporated in management prescriptions, include the necessary mitigation and protection from the above hazards.

2. Protect riparian areas

The forestwide standards and guidelines protect riparian areas from chemical use for timber management purposes, in all prescriptions. Further, there are timber management practices which recognize the unique and special riparian areas.

3. Protect rangelands

In FORPLAN, additional range management costs were added to initiate grazing systems that will improve ground cover to a minimum of 60% on medium to high elevation ranges, and will increase plant production and improve plant composition.

Maintain or enhance plant and animal diversity. This was accomplished by developing prescriptions that would not violate this MMR.

1. Provide fish and wildlife habitat needed to maintain viable populations

Management indicator species (MIS) have been selected and tracked in FORPLAN to represent the significant ecosystems on the Forest and the associated wildlife that depend upon those ecosystems. Endangered, threatened, and sensitive species were included in this MIS list. Maintenance of minimum viable populations of wildlife was a part of the design for all management prescriptions.

Protect threatened and endangered species habitat. As a minimum for all prescriptions, the standards and guidelines state that every effort should be made to remove wildlife species from the Threatened and Endangered list. The Lahonton Cutthroat Trout and the Paiute Cutthroat Trout are the two species on the Toiyabe federally classified as Threatened. The Toiyabe will continue to assist and cooperate with the State Fish and Game agencies in the effort to maintain and enhance habitat for these fish.

Wild Horse and Burros. No prescriptions were developed that would violate the 1971 law protecting wild-free roaming horses and burros.

BENCHMARK ANALYSIS

The purpose of benchmark analysis is the (1) exploration of maximum economic and biological resource use and development opportunities, (2) evaluation of capabilities between price and non-prices objectives, and (3) ability to respond to major issues and concerns. Four types of benchmarks were developed for the Toiyabe National Forest:

1. Maximum Physical and biological production benchmarks -- these defind maximum potential (supply) for timber, developed recreation, dispersed recreation, range, and wilderness with associated yields of other resources.

2. Economic benchmarks -- these define the mix of resource yield producing maximum present net value with (1) market values, and (2) assigned and market values.

3. Minimum level benchmark -- this benchmark defines costs and associated yield required to retain the Toiyabe National Forest in federal ownership, comply with minimum laws, prevent significant or permanent impairment of long-term productivity of the land, and manage uncontrollable yields and uses. This benchmark serves as the lower limit of the bench-mark "decision space" for all resources (scheduled yields).

4. Current level benchmark -- this benchmark defines the current Forest program with existing policies and guidelines. It is based on management practices, yields, and costs from FY 1981. It is used to calibrate the model, and serves as the "no action" alternative.

Ten benchmarks were developed by the Toiyabe National Forest to meet the above objectives. A list of these benchmark follows:

1. Minimum Level
2. Maximum PNV using Market Values
3. Maximum PNV using Assigned Values
4. Maximum Wilderness
5. Minimum Wilderness
6. Current Level
7. Maximum Timber
8. Maximum Range
9. Maximum Developed Recreation
10. Maximum Dispersed Recreation

Benchmarks 4 and 5 are required as a result of the 1983 decision to re-evaluate all inventoried roadless areas for their wilderness potential.

Minimum Level Benchmark
(BENCHMARK A)

Objective: To display the minimum cost needed to maintain the National Forest status of the Toiyabe Forest. It is a custodial management philosophy.

Objective Function: Maximizes PNV for the 8 period planning horizon (200 years).

Constraints:

1. All analysis areas and zones were "locked-in" to the minimum level (Management Emphasis - Goal 1, Timber 1, Timber Hauling Emphasis 1, or Range 1) prescription;
2. MMR's were built into the minimum level prescriptions, management practices, and the standards and guidelines.
3. Due to the California Wilderness Act (CWA) of 1984:

Wilderness Areas	Roadless areas in California "locked-out" of Goal 6 (Wilderness prescription)
Mokelumme Wilderness Area	Mount Olson
Carson Iceberg Wilderness	Raymond Peak
	South Horsethief
	Dardenelles
	Cottonwood
	Carson Iceberg Fringe
	Wildhorse
	Devils Gate

Assumptions:

1. No sawtimber program.
2. No new capital investments.
3. Protecting life, health, and safety of the incidental user.
4. Preventing environmental damage to land or resources of the adjoining land of other ownerships or downstram areas.
5. Outputs will decline.
6. Administering unavoidable non-Forest Service special uses.
7. Conservation of soil and water resources, while not allowing significant or permanent impairment of the productivity of the land.

Some additional work was done outside FORPLAN to achieve the objective of this benchmark. This involved deleting activities and outputs that were not associated with minimum level management. The outputs associated with minimum level management include only uncontrollable outputs and uses, such as naturally occurring water runoff, wildlife and fish, dispersed recreation, and minerals. The list of activities that were included in the Minimum Level Benchmark can be found in the process records located in the Supervisor's office.

MODELING CONSTRAINTS

In FORPLAN, five additional constraints were necessary to model all remaining benchmarks. These modeling constraints were:

1. CMAI: Culmination of Mean Annual Increment

   Earliest age of final harvest cut must be greater than or equal to the age of CMAI for that working group. This constraint is required by 36 CFR 219.16(a)(1).

2. NDY: Nondeclining Yield

   The harvest volume for any decade shall be equal to, or greater than, the harvest volume for the preceding decade. This constraint is required by 36 CFR 219.16(a)(1).

3. Perpetual Timber Harvest

   This attempts to meet the NFMA requirements (36 CFR 219.   ) by ensuring that the Forest contains as much timber inventory volume in the last period as a Forest would have, on the average, under the management intensities selected in the analysis.

4. LTSY: Long-Term Sustained Yield Link

   The harvest in the last period must be less than or equal to the long-term sustained yield calculated internally in FORPLAN. This complies with the 36 CFR 219.16(a)(1) requirement in the NFMA regulations.

5. Demand Cut-offs

   This constraint prevents the valuation of developed, dispersed, and wilderness recreation outputs produced in excess of the RPA targets. This constraint is necessary to ensure that assumptions of a horizontal demand curve are not violated. For all other resources, demand exceeds supply, and a cut-off was not enforced.

Maximum PNV using Market Values
(BENCHMARK B)

Objective: To maximize present net value for all resources with established market values. On the Toiyabe National Forest, timber, developed recreation, and livestock permitted use have market values.

Objective Function: Maximizes PNV on all market costs and benefits for the 8 period planning horizon (200 years).

Constraints:

1. MMR's were incorporated into all prescriptions, management practices, and the standards and guidelines.

2. Hoover Wilderness area is managed as wilderness.

3. Due to the California Wilderness Act (CWA) of 1984:

Wilderness Areas	Roadless areas in California "locked-out" of Goal 6 (Wilderness prescription)
Mokelumme Wilderness Area	Mount Olson
Carson Iceberg Wilderness	Raymond Peak
	South Horsethief
	Dardenelles
	Cottonwood
	Carson Iceberg Fringe
	Wildhorse
	Devils Gate

Assumptions: In addition to the common assumptions about demand, it was assumed that while no values (benefits) were assigned to non-market outputs such as water and dispersed recreation, costs incurred for these non-market outputs must be included in the objective function.

Maximum PNV using Assigned Values
(BENCHMARK C)

Objective: To maximize present net value for all resources with an established market or assigned values. On the Toiyabe National Forest, timber, developed recreation, and permitted livestock use have market values. Dispersed recreation, wilderness use, and water have assigned values.

Objective Function: Maximize PNV for all outputs with market or assigned values during the 8 period planning horizon (200 years).

Constraints:

1. MMR's incorporated into all prescriptions, management practices, and the standards and guidelines.

2. Hoover Wilderness area is managed as Wilderness.

3. Due to the California Wilderness Act (CWA) of 1984:

Wilderness Areas	Roadless areas in California "locked-out" of Goal 6 (Wilderness prescription)
Mokelumme Wilderness Area	Mount Olson
Carson Iceberg Wilderness	Raymond Peak
	South Horsethief
	Dardenelles
	Cottonwood
	Carson Iceberg Fringe
	Wildhorse
	Devils Gate

Assumptions: In addition to the common assumptions about demand, all values (benefits) either market or assigned were included in the objective function. All costs were incurred.

Maximum Wilderness
(BENCHMARK D)

Objective: To maximize roadless areas assigned to wilderness while maintaining the Minimum Management Requirements. This Benchmark includes all Roadless Areas that meet roadless definition.

Objective Function: Maximization of wilderness outputs, with a roll-over to maximize PNV considering the assignment of the remaining resources.

Constraints:

1. MMR's were incorporated into the management prescriptions, management practices, and the standards and guidelines.

2. Hoover Wilderness area is managed as wilderness.

3. All roadless areas in FORPLAN were allowed to be disignated wilderness (goal 6) regardless of whether they were designated non-wilderness in the California Wilderness Act (CWA) of 1984. All roadless areas were considered for wilderness despite passage of the CWA in order to identify the maximum wilderness resource for the subesquent planning revision scheduled in 10 to 15 years.

Assumptions: In addition to the common assumptions about demand, all values (benefits) either market or assigned were included in the objective function. All costs were incurred.

Minimum Wilderness
(BENCHMARK E)

Objective: To Minimize the amount of roadless areas assigned a wilderness prescription, while maintaining the Minimum Management Requirements.

Objective Function: Maximization of PNV for all output with either market or assigned values for the 8 period planning horizon (200 years).

Constraints:

1. MMR's were incorporated into the management prescriptions, management practice, and the standards and guidelines.

2. Hoover Wilderness area is managed as Wilderness.

3. Due to the California Wilderness Act (CWA) of 1984:

Wilderness Areas	Roadless areas in California "locked-out" of Goal 6 (Wilderness prescription)
Mokelumme Wilderness Area	Mount Olson
Carson Iceberg Wilderness	Raymond Peak
	South Horsethief

Dardenelles
Cottonwood
Carson Iceberg Fringe
Wildhorse
Devils Gate

4. All roadless areas in Nevada were "locked-out" of the Wilderness prescription (goal 6).

Assumptions: In addition to the common assumptions about demand, all values (benefits) either market or assigned were included in the objective function. All costs were incurred.

Current Level Benchmark
(BENCHMARK F)

Objective: To display the current level of goods and services provided by the Toiyabe and the most likely amount of goods and services expected to be provided in the future if current management direction continues. This represents the "no action" alternative.

Objective Function: Maximizes PNV for the 8 period planning horizon (200 years).

Constraints:

1. All analysis areas and zones (except wilderness areas) were "locked-in" to the current level (Management Emphasis - Goal 2, Timber 2, Timber Hauling 2, or Range 2) prescription,

2. A lower limit of 6000 MBF of timber harvesting per year, from periods 1 through 8 to meet current levels of timber harvesting.

3. Wilderness areas:

Existing Hoover Wilderness
Carson Iceberg Wilderness (California Wilderness Act of 1984)
Mokelumme Wilderness Addition (California Wilderness Act of 1984)
Excelsior (Nevada Rare II Recommendation)
Arc Dome (Nevada Rare II Recommendation)

Total Acreage = 303,600 acres

Further Planning Areas:

California	Nevada
Hoover Addition (Leavitt Lake Planning area & Hoover West Planning area)	Sweetwater
Hoover Extention (Hoover East & Hoover East-South)	
Carson Iceberg Fringe	

Further planning areas under current management were to be set aside for future study. In FORPLAN, Goal 6 (wilderness prescription) was forced to these areas to maintain their protective status.

Assumptions:

1. Standards and guidelines may continue or drop depending on the program element,
2. The current management budget is based on FY 1981,
3. Outputs reflect the FY 1981 budget and activities,
4. Most MMR's were incorporated into the current level prescription, management practices, and the standards and guidelines.

Maximum Timber
(BENCHMARK G1)

Objective: To maxmize the timber volumes harvested from the Toiyabe National Forest while maintaining the Minimum Management Requirements.

Objective Function: Maximization of sawtimber outputs, with a roll-over to maximize PNV considering the other resources.

Constraints:

1. MMR's were incorporated into all prescriptions, management practices, and the standards and guidelines.
2. Hoover Wilderness area is managed as wilderness.
3. Due to the California Wilderness Act (CWA) of 1984:

Wilderness Areas	Roadless areas in California "locked-out" of Goal 6 (Wilderness prescription)
Mokelumme Wilderness Area	Mount Olson
Carson Iceberg Wilderness	Raymond Peak
	South Horsethief
	Dardenelles
	Cottonwood
	Carson Iceberg Fringe
	Wildhorse
	Devils Gate

Assumptions: In addition to the common assumptions about demand, all values (benefits) either market or assigned were included in the objective function. All costs were incurred.

Maximum Range
(BENCHMARK G2)

Objective: To maximize range production (AUM's) from the Toiyabe National Forest while maintaining the Minimum Management Requirements.

Objective Function: To maximize range outputs, with a roll-over to maximize PNV considering the other resources.

Constraints:

1. MMR's were incorporated into management prescriptions, management practices, and the standards and guidelines.

2. Hoover Wilderness area is managed as wilderness.

3. Due to the California Wilderness Act (CWA) of 1984:

Wilderness Areas	Roadless areas in California "locked-out" of Goal 6 (Wilderness prescription)
Mokelumme Wilderness Area	Mount Olson
Carson Iceberg Wilderness	Raymond Peak
	South Horsethief
	Dardenelles
	Cottonwood
	Carson Iceberg Fringe
	Wildhorse
	Devils Gate

Assumptions: In addition to the common assumptions about demand, all values (benefits) either market or assigned were included in the objective function. All costs were incurred.

Maximum Developed Recreation

(BENCHMARK G4)

Objective: To maximize developed recreation outputs, while maintaining the Minimum Mangement Requirements.

Objective Function: To Maximize developed recreation outputs, with roll-over to maximize PNV considering the assignment of the other resources.

Constraints:

1. MMR's were incorporated into the management prescription, management practices, and the standards and guidelines.

2. Hoover Wilderness area is managed as Wilderness.

3. Due to the California Wilderness Act (CWA) of 1984:

Wilderness Areas	Roadless areas in California "locked-out" of Goal 6 (Wilderness prescription)
Mokelumme Wilderness Area	Mount Olson
Carson Iceberg Wilderness	Raymond Peak
	South Horsethief
	Dardenelles
	Cottonwood
	Carson Iceberg Fringe
	Wildhorse
	Devils Gate

Assumptions: In addition to the common assumptions about demand, all values (benefits) either market or assigned were included in the objective function. All costs were incurred.

Maximum Dispersed Recreation
(BENCHMARK G5)

Objective: To maximize dispersed recreation outputs while maintaining the Minimum Managment requirements.

Objective Function: To maximize dispersed recreation outputs, with a roll-over the maximize PNV considering the assignment of the other outputs.

Constraints:

1. MMR's were incorporated into the management prescription, management practices, and the standards and guidelines.

2. Hoover Wilderness area is managed as Wilderness.

3. Due to the California Wilderness Act (CWA) of 1984:

Wilderness Areas	Roadless areas in California "locked-out" of Goal 6 (Wilderness prescription)
Mokelumme Wilderness Area	Mount Olson
Carson Iceberg Wilderness	Raymond Peak
	South Horsethief
	Dardenelles
	Cottonwood
	Carson Iceberg Fringe
	Wildhorse
	Devils Gate

Assumptions: In addition to the common assumptions about demand, all values (benefits) either market or assigned were included in the objective function. All costs were incurred.

TABLE B-13 Resource Yields, Activities, Costs and Benefits by Benchmarks

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

YIELD/ACTIVITY (by decade)	Method of Measure	BENCHMARKS									
		MIN	PNV MKT	PNV	MAX WLD	MIN WLD	CURR	TBR	RGE	DEV REC	DISP REC
RECREATION											
Developed recreation	M RVDS/ YR										
Decade 1		0	1096.	909.	909.	909.	892.	1009.	1090.	1090.	912.
2		0	1204.	719.	719.	719.	544.	985.	1156.	1210.	719.
3		0	1348.	492.	492.	492.	456.	997.	1240.	1360.	487.
4		0	1545.	513.	513.	513.	456.	1045.	1368.	1555.	487.
5		0	1660.	513.	513.	513.	456.	1100.	1440.	1670.	487.
10		0	1792.	513.	513.	513.	456.	1208.	1605.	1833.	487.
15		0	1802.	513.	513.	513.	456.	1218.	1615.	1843.	487.
Dispersed recreation	M RVDS/ YR										
Decade 1		1548.	1467.	2040.	1619.	2078.	1591.	1919.	1848.	1791.	2169.
2		1513.	1403.	2397.	1545.	2397.	1892.	2303.	1986.	2080.	2397.
3		1353.	1421.	2578.	1765.	2578.	2088.	2578.	2156.	2391.	2578.
4		1353.	1421.	2764.	1765.	2764.	2088.	2578.	2156.	2391.	2764.
5		1353.	1421.	2862.	1765.	2862.	2088.	2578.	2156.	2391.	2862.
10		1353.	1421.	2862.	1765.	2862.	2088.	2578.	2156.	2391.	2862.
15		1353.	1421.	2862.	1765.	2562.	2088.	2578.	2156.	2391.	2862.
WILDLIFE AND FISHERIES	(50 yrs)										
Wildlife Habitat improvement	M acres	0	14.9	158.0	56.9	197.8	99.9	117.3	40.8	111.6	206.0
Management Indicator species	M animal										
Goshawk (pairs)	breed pr	3900.0	3590.0	2120.0	3950.0	3300.0	3000.0	1800.0	3590.0	3360.0	3300.0
Pine Marten	M animal	64.0	60.0	42.0	64.6	47.5	32.0	24.5	60.0	52.0	47.5
Williamson's Sapsucker	"	202.0	203.0	132.0	202.0	171.1	139.0	107.0	203.0	196.0	171.0
Hairy Woodpecker	"	290.0	266.0	198.0	290.0	252.0	176.0	169.0	226.0	286.0	252.0
Mule Deer	"	1400.0	1306.0	1390.0	1337.0	1375.0	1577.0	1645.0	1306.0	1492.0	1375.0
Sage Grouse	"	865.0	783.0	770.0	865.0	1130.0	750.0	715.0	783.0	1146.0	1130.0
Yellow warbler	"	340.0	277.0	224.0	300.0	280.0	238.0	227.0	277.0	338.0	280.0
Palmer's Chipmunk	"	400.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
Yellow-bellied Sapsucker	"	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
Piute Cutthroat Trout	M fish/ stream/ mile	22.0	15.4	15.2	18.5	21.5	20.1	17.5	15.4	5.0	21.5
Lahontan Cutthroat Trout	"	21.0	15.0	14.5	17.5	21.4	19.8	16.7	15.0	4.9	21.4
Dispersed Wildlife Use	(50 yrs)										
General Forest Use	MM WFUDS	29.14	11.76	33.03	6.26	28.03	11.4	26.19	25.99	27.69	28.03
Wilderness	"	7.02	4.48	7.6	14.60	5.19	6.0	6.77	1.89	7.31	1.84

TABLE B-13 Resource Yields, Activities, Costs and Benefits by Benchmarks

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

YIELD/ACTIVITY (by decade)	Method of Measure	BENCHMARKS									
		MIN	PNV MKT	PNV	MAX WLD	MIN WLD	CURR	TBR	RGE	DEV REC	DISP REC
TIMBER											
Base Harvest	MMBF/Yr	0	0	0	0	0	6.0	16.9	0	0	0
Decade 1		0	0	0	0	0	6.0	16.7	0	0	0
2		0	0	0	0	0	6.0.	16.7	0	0	0
3		0	0	0	0	0	6.0	16.7	0	0	0
4		0	0	0	0	0	6.0	16.6	0	0	0
5		0	0	0	0	0	6.0	16.9	0	0	0
10		0	0	0	0	0	6.0	16.7	0	0	0
15		0	0	0	0	0	6.0	16.7	0	0	0
Base Harvest	MMCF/yr	0	0	0	0	0	.9	2.6	0	0	0
Decade 1		0	0	0	0	0	.9	2.6	0	0	0
2		0	0	0	0	0	.9	2.6	0	0	0
3		0	0	0	0	0	.9	2.6	0	0	0
4		0	0	0	0	0	.9	2.6	0	0	0
5		0	0	0	0	0	.9	2.6	0	0	0
10		0	0	0	0	0	.9	2.6	0	0	0
15											
Fuelwood	(50 yrs) MMCF	0	31.2	23.5	15.75	27.0	28.1	28.6	34.45	28.50	26.10
Long term sustained yield	MMCF/YR	0	0	0	0	0	1.1	2.61	0	0	0
Christmas Trees for 50 yrs.	M each	0	170.8	24.2	24.2	56.6	196.9	24.2	281.8	62.3	47.5
Pinyon Nuts	M lbs	0	4402.8	3073.2	4000.9	3109.7	6249.0	3058.2	6369.2	3294.	3070.2
Posts & Poles	M each	0	29.7	8.7	8.7	25.2	25.1	8.7	33.6	10.5	19.8
Reforestation	M acres/ yr	0	.031 1/	.02 1/	.02 1/	.02 1/	.62	1.29	.04 1/	.03 1/	.02 1/
Decade 1		0	.031 1/	.02 1/	.02 1/	.02 1/	.22	.65	.04 1/	.03 1/	.02 1/
2		0	.031 1/	.02 1/	.02 1/	.02 1/	.14	.63	.04 1/	.03 1/	.02 1/
3		0	.031 1/	.02 1/	.02 1/	.02 1/	.14	.65	.04 1/	.03 1/	.02 1/
4		0	.031 1/	.02 1/	.02 1/	.02 1/	.07	.49	.04 1/	.03 1/	.02 1/
5		0	.031 1/	.02 1/	.02 1/	.02 1/	.36	.72	.04 1/	.03 1/	.02 1/
10		0	.031 1/	.02 1/	.02 1/	.02 1/	.29	.78	.04 1/	.03 1/	.02 1/
15											
RANGE											
livestock use	M AUMS/ yr	0	96.1	94.0	93.8	93.6	98.4	95.5	96.7	95.8	93.6
Decade 1		0	100.2	92.6	92.3	91.7	98.4	96.1	108.3	97.5	91.9
2		0	100.0	92.5	92.3	91.6	98.4	96.5	110.6	98.0	91.8
3		0	100.0	92.5	92.3	91.6	98.4	96.5	110.6	98.0	91.8
4		0	100.0	92.5	92.3	91.6	98.4	96.5	110.6	98.0	91.8
5		0	100.0	92.5	92.3	91.6	98.4	96.5	110.6	98.0	91.8
10		0	100.0	92.5	92.3	91.6	98.4	96.5	110.6	98.0	91.8
15											

1/ Due to non-regulated products

TABLE B-13 Resource Yields, Activities, Costs and Benefits by Benchmarks

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

YIELD/ACTIVITY (by decade)	Method of Measure	BENCHMARKS									
		MIN	PNV MKT	PNV	MAX WLD	MIN WLD	CURR	TBR	RGE	DEV REC	DISP REC
Wild Horse/Burro	M AUMS/ yr										
Decade 1		4.1	4.3	5.6	5.3	7.0	4.3	5.6	5.5	5.5	6.2
2		4.0	4.3	5.8	5.5	7.6	4.3	5.9	5.5	5.7	6.8
3		4.0	4.2	5.8	5.6	7.7	4.2	5.9	5.5	5.7	6.9
4		4.0	4.2	5.8	5.6	7.7	4.2	5.9	5.5	5.7	6.9
5		4.0	4.2	5.8	5.6	7.7	4.2	5.9	5.5	5.7	6.9
10		4.0	4.2	5.8	5.6	7.7	4.2	5.9	5.5	5.7	6.9
15		4.0	4.2	5.8	5.6	7.7	4.2	5.9	5.5	5.7	6.9
MINERALS											
Operating Plans	# Plans/ yr										
Decade 1		188.	253.	213.	213.	250.	252.	217.	296.	225.	243.
2		188.	253.	213.	213.	250.	252.	217.	296.	225.	243.
3		118.	253.	213.	213.	250.	252.	217.	296.	225.	243.
4		118.	253.	213.	213.	250.	252.	217.	296.	225.	243.
5		118.	253.	213.	213.	250.	252.	217.	296.	225.	243.
10		118.	253.	213.	213.	250.	252.	217.	296.	225.	243.
15		118.	253.	213.	213.	250.	252.	217.	296.	225.	243.
Acres Reclaimed	# acres/ yr										
Decade 1		282.	426.	650.	567.	1015.	480.	563.	703.	560.	916.
2		282.	426.	650.	567.	1015.	480.	563.	703.	560.	916.
3		282.	426.	650.	567.	1015.	480.	563.	703.	560.	916.
4		282.	426.	650.	567.	1015.	480.	563.	703.	560.	916.
5		282.	426.	650.	567.	1015.	480.	563.	703	560.	916.
10		282.	426.	650.	567.	1015.	480.	563.	703.	560.	916.
15		282.	426.	650.	567.	1015.	480.	563.	703.	560.	916.
Acres Disturbed	# acres/ yr										
Decade 1		964.	1343.	1120.	1124.	1355.	1360.	1141.	1587.	1180.	1324.
2		964.	1343.	1120.	1124.	1355.	1360.	1141.	1587.	1180.	1324.
3		964.	1343.	1120.	1124.	1355.	1360.	1141.	1587.	1180.	1324.
4		964.	1343.	1120.	1124.	1355.	1360.	1141.	1587.	1180.	1324.
5		964.	134.	1120.	1124.	1355.	1360.	1141.	1587.	1180.	1324.
10		964.	134.	1120.	1124.	1355.	1360.	1141.	1587.	1180.	1324.
15		964.	134.	1120.	1124.	1355.	1360.	1141.	1587.	1180.	1324.
WATER	(50 yrs)										
Meeting Water Quality Standards	M Ac-Ft/ yr	932.	932.	932.	932.	932.	932.	932.	932.	932.	932.

TABLE B-13 Resource Yields, Activities, Costs and Benefits by Benchmarks

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

COSTS 1978 Dollars (by decade)	Method of Measure	BENCHMARKS									
		MIN	PNV MKT	PNV	MAX WLD	MIN WLD	CURR	TBR	RGE	DEV REC	DISP REC
ROADS											
Arterial/Collector Construction	Miles/ yr										
Decade 1		0	0	0	0	0	1.7	6.3	0	0	0
2		0	0	0	0	0	1.2	1.1	0	0	0
3		0	0	0	0	0	.9	0.5	0	0	0
4		0	0	0	0	0	1.0	5.0	0	0	0
5		0	0	0	0	0	.4	2.9	0	0	0
Arterial/Collector Reconstruction	Miles/ yr										
Decade 1		0	1.5	26.5	0	8.0	7.0	21.4	3.0	8.0	8.0
2		0	1.5	26.5	0	8.0	7.7	26.9	3.0	8.0	8.0
3		0	1.5	26.5	0	8.0	6.3	27.2	3.0	8.0	8.0
4		0	1.5	26.5	0	8.0	7.5	23.3	3.0	8.0	8.0
5		0	1.5	26.5	0	8.0	7.9	25.6	3.0	8.0	8.0
Timber Purchurser Road Construction	Miles/ yr										
Decade 1		0	0	0	0	0	3.5	180.6	0	0	0
2		0	0	0	0	0	2.2	178.4	0	0	0
3		0	0	0	0	0	1.5	17.97	0	0	0
4		0	0	0	0	0	2.0	178.7	0	0	0
5		0	0	0	0	0	1.2	177.3	0	0	0
Timber Purchurser Road Reconstruction	Miles/ yr										
Decade 1		0	0	0	0	0	2.7	57.8	0	0	0
2		0	0	0	0	0	3.0	57.1	0	0	0
3		0	0	0	0	0	4.0	56.9	0	0	0
4		0	0	0	0	0	2.8	57.2	0	0	0
5		0	0	0	0	0	3.5	56.7	0	0	0
WILDERNESS											
Wilderness Recreation	M RVDS/YR										
Decade 1		.80	251.2	763.4	1221.7	100.1	442.4	672.3	487.3	730.0	125.4
2		.80	257.3	858.8	1317.0	100.1	442.4	767.5	547.8	825.2	129.6
3		.80	261.9	941.0	1399.1	100.1	442.4	849.7	604.3	907.4	132.8
4		.80	261.9	941.0	1399.1	100.1	442.4	849.7	604.3	907.4	132.8
5		.80	261.9	941.0	1399.1	100.1	442.4	849.7	604.3	907.4	132.8
10		.80	261.9	941.0	1399.1	100.1	442.4	849.7	604.3	907.4	132.8
15		.80	261.9	941.0	1399.1	100.1	442.4	849.7	604.3	907.4	132.8

TABLE B-13 Resource Yields, Activities, Costs and Benefits by Benchmarks

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

COSTS 1978 Dollars (by decade)	Method of Measure	BENCHMARKS									
		MIN	PNV MKT	PNV	MAX WLD	MIN WLD	CURR	TBR	RGE	DEV REC	DISP REC
Budget to implement	Million $/yr										
Decade 1		1.7	4.2	5.2	3.3	5.3	4.5	6.3	4.9	5.5	5.3
2		1.7	4.2	5.2	3.3	5.3	4.5	6.4	4.9	5.5	5.3
3		1.7	4.2	5.2	3.3	5.3	4.4	6.5	5.0	5.5	5.3
4		1.7	4.4	5.2	3.4	5.3	4.4	6.7	5.0	5.7	5.2
5		1.7	4.4	5.2	3.3	5.3	4.4	6.7	5.1	5.7	5.2
Transportation Appropriated Dollars	M $/yr										
Decade 1		0	310.	917.3	162.	917.	328.0	1604.	464.	917.	917.
2		0	310.	917.3	162.	917.	320.2	1409.	464.	917.	917.
3		0	310.	917.3	162.	917.	318.7	1382.	464.	917.	917.
4		0	310.	917.3	162.	917.	328.1	1572.	464.	917.	917.
5		0	310.	917.3	162.	917.	325.4	1501.	464.	917.	917.
Purchaser Credit Roads	"										
Decade 1		0	0	0	0	0	95.0	286.	0	0	0
2		0	0	0	0	0	92.7	233.	0	0	0
3		0	0	0	0	0	89.1	218.	0	0	0
4		0	0	0	0	0	91.2	287.	0	0	0
5		0	0	0	0	0	94.6	267.	0	0	0
Capital Investment (except roads)	Million $/yr										
Decade 1		.025	.54	1.03	.29	.61	.44	1.11	.66	.76	.59
2		.025	.39	.74	.23	.56	.40	.69	.42	.62	.54
3		.025	.30	.72	.48	.58	.38	1.03	.42	.53	.55
4		.025	.42	.63	.25	.56	.37	.91	.44	.64	.51
5		.025	.33	.67	.22	.54	.36	.95	.39	.56	.52
Operation & Maintenance											
Decade 1		1.70	3.21	3.20	2.76	4.27	3.18	3.56	3.77	3.70	3.69
2		1.70	3.29	3.51	2.73	3.59	3.16	3.61	3.82	3.78	3.58
3		1.70	3.39	3.48	2.69	3.56	3.12	3.67	3.99	3.88	3.55
4		1.70	3.46	3.50	2.71	3.58	3.12	3.68	3.94	3.95	3.55
5		1.70	3.55	3.50	2.71	3.58	3.12	3.74	4.01	4.03	3.55

TABLE B-13 Resource Yields, Activities, Costs and Benefits by Benchmarks

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

BENEFITS 1978 DOLLARS (by decade)	Method of Measure	BENCHMARKS									
		MIN	PNV MKT	PNV	MAX WLD	MIN WLD	CURR	TBR	RGE	DEV REC	DISP REC
Total Benefits	Million $/year										
Decade 1		11.82	20.24	31.18	29.22	25.39	25.41	32.56	25.74	29.86	25.76
2		11.19	20.40	33.45	32.37	28.26	23.80	33.68	29.18	33.92	28.84
3		10.51	20.84	34.98	32.44	30.45	25.55	36.19	31.46	37.02	30.90
4		10.51	21.44	36.42	34.21	31.27	25.55	38.73	34.25	40.37	31.71
5		10.51	21.78	36.85	34.21	31.31	25.55	39.09	34.47	40.99	32.14
10		10.51	22.18	36.85	34.21	31.31	25.55	39.48	34.96	41.48	32.14
15		10.51	22.21	36.85	34.21	31.31	25.55	39.45	35.00	41.51	32.14
Timber	"										
Decade 1		0	0	0	0	0	.34	.95	0	0	0
2		0	0	0	0	0	.35	.79	0	0	0
3		0	0	0	0	0	.34	.69	0	0	0
4		0	0	0	0	0	.34	.60	0	0	0
5		0	0	0	0	0	.35	.54	0	0	0
10		0	0	0	0	0	.34	.61	0	0	0
15		0	0	0	0	0	.34	.55	0	0	0
Other Timber 2/	MM$/50 yrs	0	1.3	.8	1.0	.9	1.8	.8	2.0	.9	.9
Developed Recreation	Million $/year										
Decade 1		0	3.29	2.73	2.72	2.73	2.67	3.03	3.27	3.27	2.74
2		0	3.61	2.16	2.16	2.16	1.63	2.96	3.47	3.63	2.16
3		0	4.04	1.48	1.48	1.48	1.37	2.99	3.72	4.08	1.46
4		0	4.64	1.54	1.54	1.54	1.37	3.14	4.10	4.67	1.46
5		0	4.98	1.54	1.54	1.54	1.37	3.30	4.32	5.01	1.46
10		0	5.38	1.54	1.54	1.54	1.37	3.62	4.81	5.50	1.46
15		0	5.41	1.54	1.54	1.54	1.37	3.65	4.85	5.53	1.46
Dispsersed Recreation	"										
Decade 1		4.64	4.40	6.12	3.51	8.12	4.77	5.76	5.55	5.37	8.05
2		4.54	4.21	7.19	4.64	10.68	5.68	6.92	5.96	6.24	10.59
3		4.06	4.26	7.73	5.30	12.59	6.27	7.73	6.47	7.17	12.50
4		4.06	4.26	8.29	5.30	12.59	6.27	7.73	6.47	7.17	12.50
5		4.06	4.25	8.29	5.30	12.59	6.27	7.73	6.47	7.17	12.50
10		4.06	4.26	8.29	5.30	12.59	6.27	7.73	6.47	7.17	12.50
15		4.06	4.26	8.29	5.30	12.59	6.27	7.73	6.47	7.17	12.50
Permitted Livestock Use											
Decade 1		0	1.26	1.23	1.23	1.23	1.29	1.25	1.27	1.26	1.23
2		0	1.32	1.22	1.21	1.20	1.29	1.26	1.42	1.28	1.21
3		0	1.31	1.21	1.21	1.20	1.29	1.27	1.45	1.29	1.20
4		0	1.31	1.21	1.21	1.20	1.29	1.27	1.45	1.29	1.20
5		0	1.31	1.21	1.21	1.20	1.29	1.27	1.45	1.29	1.20
10		0	1.31	1.21	1.21	1.20	1.29	1.27	1.45	1.29	1.20
15		0	1.31	1.21	1.21	1.20	1.29	1.27	1.45	1.29	1.20

2/ Includes Christmas trees, Pinyon nuts and posts and poles

TABLE B-13 Resource Yields, Activities, Costs and Benefits by Benchmarks

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

BENEFITS (By Decade) 1978 dollars	Method of Measure	BENCHMARKS									
		MIN	PNV MKT	PNV	MAX WLD	MIN WLD	CURR	TSR	RGE	DEV REC	DISP REC
Wilderness Recreation	Million $/yr										
Decade 1		.80	2.01	6.11	9.77	.80	3.54	5.38	3.90	5.84	1.00
2		.80	2.06	6.87	10.54	.80	3.54	6.14	4.38	6.60	1.04
3		.80	2.10	7.53	11.19	.80	3.54	6.80	4.83	7.26	1.06
4		.80	2.10	7.53	11.19	.80	3.54	6.80	4.83	7.26	1.06
5		.80	2.10	7.53	11.19	.80	3.54	6.80	4.83	7.26	1.06
10		.80	2.10	7.53	11.19	.80	3.54	6.80	4.83	7.26	1.06
15		.80	2.10	7.53	11.19	.80	3.54	6.80	4.83	7.26	1.06
Wildlife	"										
Decade 1		6.38	6.78	12.62	9.84	9.92	7.02	13.60	9.21	11.52	10.08
2		5.85	6.53	13.64	11.56	10.83	6.98	12.89	11.28	13.50	11.28
3		5.65	6.45	14.66	12.72	11.73	6.99	13.99	12.32	14.55	12.12
4		5.65	6.45	15.48	12.72	12.55	6.99	14.48	12.74	15.32	12.93
5		5.65	6.45	15.91	12.72	12.59	6.99	14.74	12.74	15.60	13.36
10		5.65	6.45	15.91	12.72	12.59	6.99	14.74	12.74	15.60	13.36
15		5.65	6.45	15.91	12.72	12.59	6.99	14.74	12.74	15.60	13.36
Returns to U.S. Government..	....	........................Million Dollars Per Year........................									
Decade 1		0	1.11	.75	1.02	1.04	1.30	-1.03	1.15	1.15	1.03
2		0	1.20	.82	1.03	1.04	1.26	- .61	1.27	1.27	1.04
3		0	1.21	.77	1.00	1.01	1.24	-1.54	1.31	1.31	1.01
4		0	1.23	.78	1.00	1.01	1.24	-1.30	1.32	1.31	1.01
5		0	1.25	.78	1.00	1.01	1.24	-1.13	1.33	1.33	1.01
Returns to State											
Decade 1		0	.38	.23	.36	.36	.46	.61	.38	.38	.36
2		0	.40	.27	.34	.35	.45	.57	.42	.42	.35
3		0	.40	.26	.33	.34	.45	.55	.44	.44	.33
4		0	.41	.26	.33	.34	.45	.53	.44	.44	.33
5		0	.42	.26	.33	.34	.45	.52	.44	.44	.33

TABLE B-13 Resource Yields, Activities, Costs and Benefits by Benchmarks

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

ECONOMIC INDICATORS (By Decade) 1978 dollars	Method of Measure	BENCHMARKS									
		MIN	PNV MKT	PNV	MAX WLD	MIN WLD	CURR	TBR	RGE	DEV REC	DISP REC
Present Value Benefits	Million $/50 yrs										
Total		24.4	461.4	858.7	722.8	803.5	479.7	772.7	655.2	793.9	806.2
Timber		0	0	0	0	0	7.4	17.3	0	0	0
Other Timber 2/		0	2.2	1.5	1.3	1.7	2.3	1.8	2.6	1.9	1.7
Recreation		9.6	177.0	202.4	144.1		162.9	262.9	204.7	191.3	284.4
Wilderness		1.8	44.9	149.2	229.4	17.5	77.1	133.3	95.5	143.4	22.6
Wildlife		13.0	145.0	302.4	247.9	241.4	152.3	272.0	239.7	291.1	248.6
Range		0	28.0	26.7	26.6	26.5	28.1	27.6	30.1	27.9	26.6
Present Value Costs (4%)	"	3.7	92.4	144.3	73.4	116.1	97.6	141.5	107.9	121.9	115.2
Present Net Values (4%)	"	20.7	369.0	744.4	649.4	687.4	382.1	631.2	248.3	672.0	591.0
Benefits/Costs (4%)	"	6.6/1	5/1	7.5/1	9.8/1	6.9/1	4.9/1	5.5/1	6.1/1	6.5/1	7/1
		NET INCREASE OR DECREASE FROM NO ACTION ALTERNATIVE (A)									
Income	MM $/year										
Decade 1		00.0	-13.3	-8.9	-7.1		-5.6	-.9	-6.4	-5.5	-5.9
2		00.0	-8.6	-.9	1.6		5.9	9.6	3.7	6.3	5.9
Employment	# jobs	00.0	-725.0	-499.0	-371.0		-281.0	-111.0	-340.0	-290.0	-281.0
Decade 1		00.0	-480.0	- 81.0	131.0		387.0	483.0	270.0	363.3	387.0
2											

2/ Includes Christmas trees, pinyon nuts, posts and poles, and fuelwood

FORMULATION OF ALTERNATIVES

INTRODUCTION

An alternative is a combination of management prescriptions (including goals, objectives, management practices, standards and guidelines) applied to specific land areas to produce given levels of goods, services and uses in response to a specific management philosophy. An alternative also includes a specific budget and other functions which support the management activities defined by the prescription.

As per the National Forest System Land and Resource Management Planning regulations [36 CFR 219.12 (f)] and the Chief's direction the following alternatives were formulated:

(1) Current Program (no action) -- Current management direction is defined as the existing direction in approved management plans; continuation of existing policies, standards and guidelines, current budget updated for changing costs over time and, to the extent possible, production of current levels and mixes of resource yields.

(2) Emphasis on market opportunities -- This alternative would emphasize yields with established market prices. Management for other resources would be at economically and environmentally feasible levels consistent with the emphasis on market-oriented yields.

(3) Emphasis on nonmarket opportunities -- This alternative would emphasize water, fish and wildlife, recreation and other amenity values. Management for other resources would be at economically and environmentally feasible levels consistent with the emphasis on amenity values.

(4) Emphasis on 1980 RPA Program -- This alternative would determine how the 1980 RPA Program distributed to the Forests could best be implemented.

(5) High Productivity - This alternative would determine how the 1985 RPA Program could best be implemented.

(6) Other Alternatives -- Additional alternatives (including those necessary to respond to the full range of public issues and management concerns) were to be formulated to reflect a broad range of resource yields and expenditure levels and distributed between the minimum resource potential and the maximum resource potential.

(7) Preferred Alternative -- This is the preferred alternative identified in this draft environmental impact statement.

As displayed in this chapter, alternatives were formulated to facilitate analysis of opportunity costs and resource use and environmental trade-offs.

FORPLAN was used to help ensure that the combination of prescriptions used in an alternative was the most cost efficient.

Each alternative considered in detail states the purpose, goods and services to be produced, timing and flow, costs and benefits and conditions and uses resulting from long-term application of the alternative.

COMMON CONSTRAINTS

All alternatives had modeling constraints incorporated in the FORPLAN model. The following is a list of those constraints common to all alternatives:

1. CMAI: Culmination of Mean Annual Increment

   Earliest age of final harvest cut must be greater than or equal to the age of CMAI for that working group. This constraint is required by 36 CFR 219.16(a)(1).

2. NDY: Nondeclining Yield

   The harvest volume for any decade shall be equal to, or greater than, the harvest volume for the preceding decade. This constraint is required by 36 CFR 219.16(a)(1).

3. Perpetual Timber Harvest

   This attempts to meet the NFMA requirements (36 CFR 219.13 (D)) by ensuring that the Forest contains as much timber inventory volume in the last period as a Forest would have, on the average, under the management intensities selected in the analysis.

4. LTSY: Long-Term Sustained Yield Link

   The harvest in the last period must be less than or equal to the long-term sustained yield calculated internally in FORPLAN. This complies with the 36 CFR 219.16(a)(1) requirement in the NFMA regulations.

5. Demand Cut-Offs

   This constraint prevents the valuation of developed, dispersed, and wilderness recreation outputs produced in excess of the RPA targets. This constraint is necessary to ensure that assumptions of a horizontal demand curve are not violated. For all other resources, demand exceeds supply, and a cut-off was not enforced.

6. Minimum Management Requirements

   The Minimum Management Requirements (MMR's) described beginning on page 66 are totally incorporated for all alternatives (except the Current Alternative).

ALTERNATIVE DEVELOPEMENT

An alternative is a combination of management prescriptions applied to specific land areas to produce given levels of goods, services and uses in response to specific management philosophy. An alternative also includes activities defined by the prescription.

National Environmental Policy Act (NEPA) regulations (40 CFR 1502.14) and National Forest Management Act (NFMA) regulations (36 CFR 219.12 (f)) establish guidelines for formulating alternatives.

NEPA regulations require rigorous exploration and objective evaluation of all reasonable alternatives, including a "no action" alternative. They also require identification and discussion of alternatives eliminated from detailed study. NFMA regulations (36 CFR 219.12(f)) also require the formation of at least one alternative which responds to and incorporates the RPA Program. NFMA regulations state that the primary goal in formulating alternatives (besides complying with NEPA) is to provide an adequate basis for identifying the alternative that comes nearest to maximizing net public benefits (consistent with resource integration and management requirement).

Formulation of alternatives completes the first four planning action steps of the NFMA planning process described in Chapter One. The following summarizes the process used on the Toiyabe National Forest to formulate alternatives.

> Major public issues were identified through public involvement efforts. Management concerns were added to these public issues (Chapter 1).
>
> Public issues and management concerns were consolidated into a set of general planning questions which would guide subsequent steps. A summary of the public issues and management concerns listed by "Planning Question" (along with "Management Opportunities" to resolve issues and concerns) is contained in Appendix A.
>
> Multiple use management prescriptions, representing sets of compatible management practices, were developed to answer planning questions.
>
> Individual resource inventories were completed to identify site-specific areas having common environmental characteristics. Data was collected and stored in the Forest resource data base.
>
> Appropriate locations for applying possible management prescriptions were identified. Capability, suitability, and management opportunities of specific areas in the Toiyabe National Forest were considered in this step.
>
> Resource yields and their associated costs and values were developed for each prescription based on physical and biological factors for each area where the prescription was to be applied.
>
> Supply potentials for each resource were determined with the FORPLAN model. Various assumptions, constraints, and objectives were used to establish benchmarks for supply potentials of each resource during the Analysis of the Management Situation. Benchmarks were established for minimum level, maximum constrained single resource levels, and maximum present net values. Existing resource supply was compared to supply potentials of each benchmark. Opportunities to resolve public issues and management concerns were identified for each resource by comparing existing to potential production levels.
>
> Potential demand was estimated for the various resource activities. Indications of the need to change management direction as well as

opportunities to change future emphasis were identified.

Alternative direction statements were established to provide a broad range of options for future management of the Forest. These statements define the resource management intent for each alternative. They represent different ways to address the planning questions and resolve issues and concerns with the capability of the Forest.

Constraints for each resource were quantified by translating broad direction statements for each alternative into specific estimates of the maximum or minimum level of goods and services to be produced.

FORPLAN, a linear program model, was used to estimate goods and services produced by each alternative. The model projects outputs and costs over time.

Forest personnel validated projected outputs and feasibility of assigning management prescriptions to individual capability areas based on their knowledge of on-the-ground conditions. This process included placing prescriptions with timber production objectives on the most highly productive commercial timber lands, and placing recreation and wildlife prescriptions on the most suitable acreage. A map displaying the distribution of management prescriptions to the Toiyabe National Forest was analyzed. Management conflicts caused by this distribution were reconciled through interaction between the Toiyabe National Forest Management Team, staff specialists, and the Interdisciplinary Team. Conflict resolutions and on-the-ground feasibility resolutions were determined, and the alternatives were re-analyzed.

The last steps were repeated as necessary to arrive at a feasible range of alternatives.

The Toiyabe National Forest developed nine alternatives for consideration and analysis in the selection of the preferred alternative. The common constraints for all alternatives were those required by benchmarks: (1) Nondeclining yield, (2) Culmination of Mean Annual Increment, (3) Perpetual Timber Harvest, (4) Long-Term Sustained Yield Link, and (5) Demand Cut-offs for dispersed and wilderness recreation outputs. Due to the California Wilderness Bill, an additional constraint on the California roadless areas was applied to all alternatives. This requires that the Mokelumme Wilderness area and the Carson Iceberg Wilderness (consisting of the Carson Iceberg Core and the Tragedy-Elephants Back roadless area) be designated Wilderness. The Sweetwater, Hoover Further Planning Area (consisting of the Hoover East and Hoover East-South roadless areas), and the Hoover Planning Area (consisting of the Hoover West and the Leavitt Lake roadless areas) were considered open to multiple use or wilderness designation to be determined by the Toiyabe's Forest planning process. The rest of the roadless areas in California were "locked-out" for Wilderness designation. The Nevada roadless areas could be selected for wilderness or multiple use, as determined by each alternative.

Alternative A
(No Action - Current Budget)

Objective: To display the costs/benefits and output levels that would occur if current management were projected through the planning horizon.

Assumptions: Fiscal years 1980 program of work and the Toiyabe Unit plans served as the model for this alternative. Management direction of objectives were only altered where new regulations or policy had rendered them obsolete. Existing standards, guidelines and policies would continue over the planning horizon (200 years).

FORPLAN Objective Function: To maximize PNB using market and assigned values, and all costs for the entire planning horizon (at a 4% discount rate).

FORPLAN Constraints:

1. All analysis areas and zones (except wilderness areas) were "locked-in" to the current level (Management Emphasis - Goal 2, Timber 2, Timber Hauling 2, or Range 2) prescription,

2. A lower limit of 6000 MBF of timber harvesting per year, from periods 1 through 8 to meet current levels of timber harvesting. A lower limit must be used to force FORPLAN to schedule timber harvesting activities and outputs. If a lower limit were not set, FORPLAN would not chose to harvest timber. This lower limit of 6000 MBF represents the current level of timber harvested from the forest.

3. Existing Wilderness areas:

Existing Hoover Wilderness
Carson Iceberg Wilderness (California Wilderness Act of 1984)
Mokelumme Wilderness Addition (California Wilderness Act of 1984)

Total existing Wilderness acres = 135.1 M acres

Recommended Wilderness:

Excelsior (Nevada Rare II Recommendation)
Arc Dome (Nevada Rare II Recommendation)

Total New Wilderness Acreage = 209.8 M acres

Further Planning Areas:

California	Nevada
Hoover Planning Area (Leavitt Lake Planning area & Hoover West Planning area)	Sweetwater
Hoover Further Planning area (Hoover East & Hoover East-South)	
Carson Iceberg Planning Area	

Total Further Planning Area Acreage = 181.1 M acres

Further planning areas under current management were to be set aside for future study. In FORPLAN, Goal 6 (wilderness prescription) was forced to these areas to maintain a protective status.

TABLE B-14 COMPARISON OF ALTERNATIVE A TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	+9.2	+9.2	+9.2	+9.2	+9.2
Dispersed Rec (M RVDS)**	-4482.0	-5049.0	-4897.0	-6758.0	-7734.0
Wilderness Rec (M RVDS)**	-3210.0	-4146.0	-4986.0	-4986.0	-4986.0
Developed Rec (M RVDS)**	-170.0	-1750.0	-360.0	-570.0	-570.0
Fishing (M WFUDS)**	-1406.0	-2079.0	-2396.0	-2669.0	-2812.0
Hunting (M WFUDS)**	-939.0	-1216.0	-1394.0	-1531.0	-1602.0
Mgt. Indicator Species (M #'s)	-17.1	-41.4	-56.0	-56.0	-56.0
Habitat Improvement (M acres)	-11.8	-11.8	-11.8	-11.8	-11.8
Livestock (M AUMS)	+46.0	+58.0	+58.0	+58.0	+58.0
Wild Horse/Burro (M AUMS)	-13.2	-15.2	-15.1	-15.1	-15.1
Fuelwood (MMCF)	+ .9	+ .9	+ .9	+ .9	+ .9
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	+390.0	+390.0	+390.0	+390.0	+390.0
Discounted Benefits ***	-133.0	-89.0	-73.0	-50.0	-34.0
Discounted Costs ***	-4.6	-3.1	-2.6	-1.6	-1.4
Discounted Net Value ***	-128.0	-86.0	-70.0	-48.0	-33.0

Change in present net value for the Fifty Year Planning Horizon = -362.3

* Programmed timber sales is flatlined beyond 50 years
** Valued yield, not supply
*** In millions of dollars

Alternative B
(Market Emphasis)

Objective: To emphasize developed recreation, livestock grazing and a high output of sawtimber volume while increasing fire protection.

Assumptions: Suitable sites for the construction of new developed recreation sites are present on the Toiyabe National Forest. Adequate funding will be available. Concern by the public along the Sierra front for better fire protection will continue to increase. Demand for developed recreation will continue to exceed the current supply along the Sierra Front and at Mount Charleston. Funds for increasing the grazing capacity will be available. Coordination requirements between the mineral resource and other forest resources will increase. All acres suitable for timber management (including Roadless areas) will be available.

FORPLAN Objective Function: To maximize PNV using market and assigned values, and all costs for the entire planning horizon (at a 4% discount rate).

FORPLAN Constraints:

1. A lower limit of 100,000 permitted livestock grazing AUM's per year, during periods 2 through 8.

2. A lower limit of 7,500 wild free roaming horse/burro AUM's per year, during periods 2 through 8.

3. An upper limit of 0 MBF timber per period in the following zones: Pinyon/Juniper area, Sweetwater Roadless area, and Wildhorse Roadless area. This applies to all periods.

4. An upper limit of 1000 MBF per period in the following zones: Walker, Carson Iceberg Fringe Roadless area, Leavitt Lake Roadless area, Mt. Olson Roadless area, and Hoover East-South Roadless area. This applies to all periods.

5. A lower limit of 12,000 MBF per year for the rest of the suitable timber areas (including roadless area) during periods 1 thorugh 8. A lower limit must be used to force FORPLAN to schedule timber harvesting activities and outputs. If a lower limit were not set, FORPLAN would not chose to harvest timber. This lower limit of 12,000 MBF represents a high timber production to meet National needs.

6. Forced Goal 5 to the Alpine and Walker areas which permits the reconstruction of Sawmill, Lower Twin, Honeymoon Flat, and Hope Valley campgrounds in the first decade. Two new campgrounds were constructed in the Twin Lakes and Faith areas in the first decade.

7. Wilderness areas:

   Existing Hoover Wilderness
   Mokelumme Wilderness Addition
   Carson Iceberg Wilderness

Total Acreage = 135.1 M acres

New Wilderness Recommendation = 0 acres

TABLE B-15 COMPARISON OF ALTERNATIVE B TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	+18.6	+18.6	+18.6	+18.7	+18.7
Dispersed Rec (M RVDS)**	+1293.0	0.0	0.0	0.0	0.0
Wilderness Rec (M RVDS)**	-6633.0	-7587.0	8409.0	8409.0	8409.0
Developed Rec (M RVDS)**	+1830.0	+4230.0	+7160.0	+8010.0	+8730.0
Fishing (M WFUDS)**	-395.0	-687.0	-748.0	-749.0	-749.0
Hunting (M WFUDS)**	-501.0	-604.0	-652.0	-653.0	-653.0
Mgt. Indicator Species (M #'s)	-7.3	-4.4	-7.3	-7.3	-7.3
Habitat Improvement (M acres)	+1.4	+1.4	+1.4	+1.4	+1.4
Livestock (M AUMS)	+19.0	+74.0	+81.0	+81.0	+81.0
Wild Horse/Burro (M AUMS)	+18.8	+16.8	+16.9	+16.9	+16.9
Fuelwood (MMCF)	+1.7	+1.7	+1.7	+1.7	+1.7
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	+510.0	+510.0	+510.0	+510.0	+510.0
Discounted Benefits ***	-37.0	-25.0	-17.0	-10.0	-7.0
Discounted Costs ***	+13.0	+9.0	+6.0	+4.0	+3.0
Discounted Net Value ***	-50.0	-34.0	-22.0	-15.0	-10.0

Change in present net value for the Fifty Year Planning Horizon = -134.7

* Programmed timber sales is flatlined beyond 50 years

** Valued yield, not supply

*** In millions of dollars

Alternative C
((Non-Market Emphasis)

Objective: To emphasize suitable habitat for game and non-game species, wilderness values, and wild horses.

Assumptions: Other resources would be managed to the extent that their management does not interfere with the primary purpose of the alternative. Demand for wildlife species will continue increasing. Regional and national guidelines for wildlife would be incorporated in this alternative. Increase funding would be available for wild horse management and direct wildlife habitat improvement projects.

FORPLAN Objective Function: A sequence of four objective functions were applied to force up the level of WFUD's, and acres of habitat improvement, while minimizing the AUM's of permitted livestock use. This was followed by maximizing PNV using both the market and assigned values.

FORPLAN Constraints:

1. An upper limit of 0 MBF of timber harvesting per year in the following zones: Pinyon/Juniper, Sweetwater Roadless area, and Wildhorse Roadless area.
2. A lower limit of 2,000 MBF of timber harvesting per year for all other suitable timber lands (including Roadless areas). This applies to all periods. This constraint enables timber harvesting for wildlife habitat. A lower limit must be used to force FORPLAN to schedule timber harvesting activities and outputs. If a lower limit were not set, FORPLAN would not chose to harvest timber. This lower limit of 2,000 MBF represents timber harvesting with the objective for wildlife habitat improvement.
3. Wilderness Areas:

   Existing Hoover Wilderness
   Mokelumme Wilderness Addition
   Carson Iceberg Wilderness

   Wilderness Recommendation:

   Hoover Further Planning area
   Excelsior
   Carson Range
   Long Valley
   Bunker Hill
   Mt. Jefferson
   Table Mountain
   Mt. Charleston
   Carson Iceberg Planning Area
   Hoover Planning area
   Hunter Creek
   Bald Mountain
   Mt. Ardivey
   Toiyabe Range Peak
   Antelope Peak
   Georges Canyon
   Arc Dome
   Sweetwater

   Total Acreage = 1,113.6 M acres

TABLE B-16 COMPARISON OF ALTERNATIVE C TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	+3.1	+3.1	+3.1	+3.1	+3.1
Dispersed Rec (M RVDS)**	-4865.0	-3302.0	-1748.0	-3609.0	-4585.0
Wilderness Rec (M RVDS)**	+1701.0	+1507.0	+1352.0	+1352.0	+1352.0
Developed Rec (M RVDS)**	-70.0	-110.0	-140.0	-350.0	-350.0
Fishing (M WFUDS)**	-287.0	-408.0	-373.0	-646.0	-789.0
Hunting (M WFUDS)**	-326.0	-111.0	+24.0	-113.0	-184.0
Mgt. Indicator Species (M #'s)	+21.6	-2.6	-15.9	-15.9	-15.9
Habitat Improvement (M acres)	-9.3	-9.3	-9.3	-9.3	-9.3
Livestock (M AUMS)	0.0	-8.0	-9.0	-9.0	-9.0
Wild Horse/Burro (M AUMS)	+11.8	+9.8	+9.9	+9.9	+9.9
Fuelwood (MMCF)	-.5	-.5	-.5	-.5	-.5
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	+240.0	+240.0	+240.0	+240.0	+240.0
Discounted Benefits ***	-42.0	-28.0	-25.0	-17.0	-12.0
Discounted Costs ***	-2.0	-1.0	-1.0	-1.0	-1.0
Discounted Net Value ***	-40.0	-27.0	-24.0	-17.0	-11.0

Change in present net value for the Fifty Year Planning Horizon = -119.5

* Programmed timber sales are flatlined beyond 50 years
** Valued yield, not supply
*** In millions of dollars

Alternative D
(1980 RPA)

Objective: To Maximize Present Net Value while achieving RPA targets. The objective of this alternative is to meet the direction in the interpretation of the "revised President's Statement of Policy" which states that "at least one alternative in the EIS will be developed to determine how the 1980 Forest and Rangeland Resources Planning ACT (RPA) program could be best implemented on the Forest."

Assumptions: The RPA targets and trends over time reflect the nation's resource management priorities. The geographic population has a important effect on the distribution of targets. Issues and concerns were considered in the distribution of targets. Biological potentials were considered in target distributions.

FORPLAN Objective Function: To maximize PNV for using market and assigned values and all costs for the entire planning horizon (at a 4% discount rate).

FORPLAN Constraints:

1. There is a lower limit on developed recreation MRVD's by period. This constraint includes both public and private developed sites serving the Toiyabe National Forest. The model has a built in constraint on the amount of public developed RVD's it can produce. If an alternative were to assign all goal 5's to the analysis areas and zones, this would produce a maximum of 1,100 RVD's. Therefore, it is not possible for FORPLAN to meet the RPA target of developed RVD's without including the private developed RVD's.

   1,300 MRVD's/year for period 2
   1,560 MRVD's/year for period 3
   1,820 MRVD's/year for period 4
   2,080 MRVD's/year for period 5

2. Dispersed and Wilderness RVD's were not constrained, but desired outputs were achieved, with only a shortage of 14,000 RVD's in the fifth decade.

RPA Goal	FORPLAN Results
(per year values - decades 2 through 5)	
2,810,000 RVD's	3,038,918 RVD's
3,036,000 RVD's	3,476,042 RVD's
3,242,000 RVD's	3,476,042 RVD's
3,490,000 RVD's	3,476,042 RVD's

3. A lower limit of 98,000 AUM's per year for permitted livestock use from periods 2 to 3. Then, another lower limit was placed on this output from periods 4 to 5 of 100,000 AUM's per year.

4. A lower limit of 9,000 MBF timber harvesting per year for periods 1 through 5. A lower limit must be used to force FORPLAN to schedule timber harvesting activities and outputs. If a lower limit were not set, FORPLAN would not choose to harvest timber. This lower limit of 9,000 MBF represents the 1980 RPA timber harvesting target level.

5. Wilderness areas:

Existing Hoover Wilderness
Carson Iceberg Wilderness
Mokelumne Wilderness Area

Recommended Wilderness:

Excelsior
Mt. Ardivey
Toiyabe Range Peak
Georges Canyon
Carson Iceberg Planning Area
Mt. Jefferson
Leavitt Lake
Bunker Hill
Antelope Peak
Mt. Charleston
Hoover Planning area

Total Acreage = 592.7 M acres

TABLE B-17 COMPARISON OF ALTERNATIVE D TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	+13.9	+13.9	+13.9	+13.9	+13.9
Dispersed Rec (M RVDS)**	-779.0	0.0	0.0	0.0	-794.0
Wilderness Rec (M RVDS)**	-1780.0	-2167.0	-2474.0	-2474.0	-2474.0
Developed Rec (M RVDS)**	+930.0	+3330.0	+6380.0	+7430.0	+8290.0
Fishing (M WFUDS)**	-151.0	-173.0	-209.0	-209.0	-210.0
Hunting (M WFUDS)**	-236.0	-266.0	-279.0	-298.0	-298.0
Mgt. Indicator Species (M #'s)	+.7	-4.1	-6.8	-6.8	-6.8
Habitat Improvement (M acres)	-1.6	-1.6	-1.6	-1.6	-1.6
Livestock (M AUMS)	+21.0	+65.0	+74.0	+74.0	+74.0
Wild Horse/Burro (M AUMS)	-2.2	-4.2	-4.1	-4.1	-4.1
Fuelwood (MMCF)	+1.1	+1.1	+1.1	+1.1	+1.1
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	+390.0	+390.0	+390.0	+390.0	+390.0
Discounted Benefits ***	-28.0	-19.0	-11.0	-7.0	-4.0
Discounted Costs ***	+9.0	+6.0	+4.0	+3.0	+2.0
Discounted Net Value ***	-37.0	-24.0	-15.0	-9.0	-6.0

Change in present net value for the Fifty Year Planning Horizon = -90.5

* Programmed timber sales is flatlined beyond 50 years
** Valued yield, not supply
*** In millions of dollars

Alternative E
(25% Constrained Budget)

Objective: To maintain the present protection (fire and minerals) and grazing capacity while managing the remaining resources at a reduced level.

Assumptions: Total funding for the Toiyabe National Forest would be 75% of FY 82. Opportunities to increase grazing capacity above current levels would require expensive range improvement projects. Coordination between the mineral resource and other forest resources will increase.

FORPLAN Objective Function: To maximize PNV for using market and assigned values and all costs for the entire planning horizon (at a 4% discount rate).

FORPLAN Constraints:

1. A lower limit of 95,000 permitted livestock grazing AUM's per year, from periods 2 through 8.
2. An upper limit of 0 MBF of timber harvesting per year in the following zones: Pinyon/Juniper area, Sweetwater Planning area, and the Wildhorse Roadless area.
3. An upper limit of 1,000 MBF of timber harvesting per year in the following zones: Walker, Carson Iceberg Planning area , Leavitt Lake Planning area, Mt. Olson Roadless area, and Hoover Extention.
4. An upper limit of 0 dispersed investment dollars per year from periods 2 through 8.
5. A lower limit of 668,000 fire management and operation dollars per year in period 2, and another lower limit of $667,000 per year from periods 3 through 8.
6. An upper limit of 100,000 land ownership management dollars per year from periods 2 through 8.
7. Wilderness areas:

    Existing Hoover Wilderness
    Carson Iceberg Wilderness
    Mokelumme Wilderness Area

    Recommended Wilderness:

    Excelsior
    Mt. Charleston
    Hoover Planning Area
    Long
    Arc Dome

    Total Acreage = 306.1 M acres

TABLE B-18 COMPARISON OF ALTERNATIVE E TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	0.0	0.0	0.0	0.0	0.0
Dispersed Rec (M RVDS)**	-5025.0	-6359.0	-6492.0	-8353.0	-9329.0
Wilderness Rec (M RVDS)**	-1510.0	-2060.0	-2477.0	-2477.0	-2477.0
Developed Rec (M RVDS)**	-170.0	-260.0	+20.0	-20.0	-20.0
Fishing (M WFUDS)**	-774.0	-1186.0	-1322.0	-1595.0	1764.0
Hunting (M WFUDS)**	-735.0	-784.0	-803.0	-940.0	1011.0
Mgt. Indicator Species (M #'s)	-16.7	-30.7	-38.8	-38.8	-38.8
Habitat Improvement (M acres)	-4.5	-4.5	-4.5	-4.5	-4.5
Livestock (M AUMS)	9.0	30.0	24.0	24.0	24.0
Wild Horse/Burro (M AUMS)	-9.2	-12.2	-12.1	-12.1	-12.1
Fuelwood (MMCF)	.7	.7	.7	.7	.7
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	280.0	280.0	280.0	280.0	280.0
Discounted Benefits ***	-101.0	-67.0	-56.0	-38.0	-26.0
Discounted Costs ***	-15.0	-10.0	-7.0	-5.0	-3.0
Discounted Net Value ***	-85.0	-57.0	-49.0	-33.0	-22.0

Change in present net value for the Fifty Year Planning Horizon = -247.0

* Programmed timber sales is flatlined beyond 50 years
** Valued yield, not supply
*** In millions of dollars

Alternative P - Preferred Alternative
(Market/Non-Market Mix)

Objective: To emphasize developed and dispersed recreation, minerals, wildlife, and protection, while maintaining permitted livestock use at the current level, and lowering the wild free roaming horse/burro AUM's.

Assumptions: Suitable sites for the construction of new developed recreation sites and new dispersed recreation trails are present on the Toiyabe National Forest. Demand for game and fisheries species will continue to increase. Adequate funding will be available. Regional and National guidelines for wildlife management will be blended in this alternative. Concern by the public along the Sierra front for better fire protection will continue to increase. Demand for developed recreation will continue to exceed the current supply along the Sierra Front and at Mt. Charleston. Coordination requirements between the mineral resource and other forest resources will increase. Opportunities to increase grazing capacity above current levels would require expensive range improvement projects.

FORPLAN Objective Function: To maximize permitted livestock AUM's, then to minimize wild free roaming horse/burro AUM, followed by maximizing PNV (4% discount rate). These were performed over the entire planning horizon.

FORPLAN Constraints:

1. A lower limit of 17,000 acres of habitat improvement per year, and an upper limit of 17,100 acres, from periods 2 through 8.

2. The following constraints were placed on public developed recreation per year from periods 2 through 5:

Lower Limit	Upper Limit
1125 RVD's	1,134 RVD's
1164 RVD's	1,174 RVD's
1245 RVD's	1 254 RVD's
1315 Rvd's	1,324 Rvd's

3. A lower limit of 33.5 acres of improved watershed condition per year, and an upper limit of 344 acres, from periods 2 through 8.

4. An upper limit of 0 MBF of timber harvesting per period in the following zones: Pinyon/Juniper area, Sweetwater Planning Area, Hoover Extension Planning Area, and Wildhorse Roadless area,

5. An upper limit of 1,000 MBF of timber harvesting per period in the following zones: Walker, Carson Iceberg Planning Area, Leavitt Lake Planning Area, Mr. Olsen Roadless area, and Hoover Planning Area.

6. A lower limit of 4,500 MBF of timber harvesting per year in periods 1 through 8. A lower limit must be used to force FORPLAN to schedule timber harvesting activities and outputs. If a lower limit were not set, FORPLAN would not chose to harvest timber. This lower limit of 4,500 MBF represents a level of timber harvesting for wildlife habitat improvement and the Sierra Initiative. This amount of timber harvesting approaches the current level.

7. A lower limit of 6,480 cords per year, and an upper limit of 6,510 from periods 2 through 8 for fuelwood.

8. A lower limit of $641,530 fire management and operation dollars in periods 2, and $634,464 from periods 3 through 8.

9. A lower limit of $104,543 non-energy mineral management dollars in period 2, and $104,516 from periods 3 through 8.

10. A lower limit of $16,743 energy mineral management dollars from periods 2 through 8.

11. A lower limit of $29,793 mineral land rehabilatation dollars from periods 2 through 8.

12. A lower limit of $167,917 land ownership management dollars from period 2 through 8.

13. Wilderness areas:

    Existing Hoover Wilderness
    Carson Iceberg Wilderness
    Mokelumme Wilderness area

    Recommended Wilderness:

    Hoover Planning Area
    Arc Dome
    Mt. Jefferson
    Mt. Charleston - 32.0 M acres
    Carson Iceberg Planning Area- 4.9 M acres

    Total Acreage = 211.5 M acres

TABLE B-19 COMPARISON OF ALTERNATIVE P TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	+6.9	+6.9	+6.9	+6.9	+6.9
Dispersed Rec (M RVDS)**	-2302.0	-3031.0	-1603.0	-3464.0	-4440.0
Wilderness Rec (M RVDS)**	-1335.0	-1843.0	-2225.0	-2225.0	-2225.0
Developed Rec (M RVDS)**	+1880.0	+4060.0	+6770.0	+7330.0	+8020.0
Fishing (M WFUDS)**	-299.0	-390.0	-357.0	-358.0	-482.0
Hunting (M WFUDS)**	-336.0	-390.0	-437.0	-437.0	-437.0
Mgt. Indicator Species (M #'s)	-1.0	-12.1	-14.2	-14.2	-14.2
Habitat Improvement (M acres)	-12.0	-12.0	-12.0	-12.0	-12.0
Livestock (M AUMS)	+92.0	+55.2	+64.0	+64.0	+64.0
Wild Horse/Burro (M AUMS)	-4.4	-6.4	-6.4	-6.4	-6.4
Fuelwood (MMCF)	+1.1	+1.1	+1.1	+1.1	+1.1
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	+500.0	+500.0	+500.0	+500.0	+500.0
Discounted Benefits ***	-57.0	-30.0	-21.0	-18.0	-11.0
Discounted Costs ***	+7.0	+6.0	+4.0	+2.0	+1.0
Discounted Net Value ***	-58.0	-36.0	-25.0	-20.0	-12.0

Change in present net value for the Fifty Year Planning Horizon = -148.9

* Programmed timber sales are flatlined beyond 50 years
** Valued yield, not supply
*** In millions of dollars

Alternative F
(100% Wilderness)

Objective: To emphasize primitive recreation and wilderness values.

Assumptions: All Roadless Areas would be recommended for wilderness. All existing Developed recreation sites would be retained. Other resources would be actively managed to the extent that their management does not interfere with the primary purpose of the alternative.

FORPLAN Objective Function: Two sequential objective functions were used to meet the thrust of this alternative. First, a maximization of Wilderness Use (RVD's), Wilderness Hunting (WFUD's), and Wilderness Fishing (WFUD's) was performed, followed by a rollover to maximize PNV of the remaining resources. Both were applied to the entire planning horizon with PNV being at a 4% discount rate.

FORPLAN Constraints:

1. An upper limit of 0 MBF of timber harvesting per period from periods 1 through 8.

2. Wilderness areas:

   Existing Hoover Wilderness
   Mokelumme Wilderness Addition
   Carson Iceberg Wilderness

   Recommended Wilderness:

   Sweetwater
   Carson Range
   Excelsior
   Wellington Hills
   Lobdell
   Bald Mountain
   Sugar Loaf
   Mt. Hicks
   Arc Dome
   Shermand Peak
   Elkhorn
   South Shoshone
   Willow Creek
   Bade Creek
   Toiyabe Range Peak
   Southern Toiyabe
   Toquima Cave
   Sams Canyon
   Iron Springs-Wildcat Peak
   Mt. Jefferson
   Silver Creek
   Fitzpatrick Spring
   Brock Canyon
   Horse Heaven
   Hoover Further Planning Area
   Hoover Planning Area
   Hunter Creek
   Desert Creek Peak
   Wiley
   Long
   Buller
   Long Valley
   Marble Falls
   Paradise Peak
   North Shoshone
   Mt. Ardivey
   Bobscott
   Bunker Hill
   Marysville Creek
   Bank Spring
   Clipper Gap
   Mud Springs-Boulder
   North Moores Creek
   Mariposa
   Sagehen
   Antelope Peak
   Bald Mountain
   Table Mountain

Rock Canyon
Big Ten
Antelope
Warm Springs
Mt. Charleston
Carson Iceberg Planning Area
Big White Sage
Georges Canyon
Saulsbury
Red Peak

Total Acreage = 1992.2 M acres

TABLE B-20 COMPARISON OF ALTERNATIVE F TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	0.0	0.0	0.0	0.0	0.0
Dispersed Rec (M RVDS)**	-6531.0	-5438.0	-4253.0	-6114.0	-7090.0
Wilderness Rec (M RVDS)**	2959.0	2958.0	2958.0	2958.0	2958.0
Developed Rec (M RVDS)**	0.0	0.0	0.0	0.0	0.0
Fishing (M WFUDS)**	-537.0	-518.0	-478.0	-750.0	894.0
Hunting (M WFUDS)**	-373.0	-194.0	-83.0	-220.0	-291.0
Mgt. Indicator Species (M #'s)	-1.7	-17.6	-29.9	-29.9	-29.9
Habitat Improvement (M acres)	-18.3	-18.3	-18.3	-18.3	-18.3
Livestock (M AUMS)	-15.0	-3.0	-3.0	-3.0	-3.0
Wild Horse/Burro (M AUMS)	-3.2	-3.2	-2.1	-2.1	-2.1
Fuelwood (MMCF)	-1.1	-1.1	-1.1	-1.1	-1.1
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	0.0	0.0	0.0	0.0	0.0
Discounted Benefits ***	-43.0	-28.0	-7.0	-4.0	-3.0
Discounted Costs ***	-12.0	-8.0	-6.0	-5.0	-4.0
Discounted Net Value ***	-30.0	-20.0	-20.0	-13.0	-9.0

Change in present net value for the Fifty Year Planning Horizon = -93.4

* Programmed timber sales are flatlined beyond 50 years
** Valued yield, not supply
*** In millions of dollars

Alternative G
(1985 High Productivity/High Wilderness)

Objective: To emphasize livestock management and produce a moderate level of sawtimber while increasing fire protection.

Assumptions: Adequate funding will be available. Concern by the public along the Sierra front for better fire protection will continue to increase. Funds for increasing the grazing capacity will be available. Present suitable acres for timber management will remain constant.

FORPLAN Objective Function: To maximize PNV for using market and assigned values, and all costs for the entire planning horizon (at a 4% discount rate).

FORPLAN Constraints:

1. A Lower limit of 92,000 permitted livestock grazing AUM's per year for period 2, and 104,000 AUM's per year for periods 3 through 8.

2. A lower limit of 5,000 wild free roaming horse/burro AUM's per year from periods 2 to 8.

3. An upper limit of 0 MBF of timber harvesting per period for the following zones: Pinyon/Juniper area, Sweetwater Planning Area, and the Wildhorse Roadless area. This applies to periods 2 through 8.

4. An upper limit of 1,000 MBF of timber harvesting per period for the following zones: Walker, Carson Iceberg Planning Area, Leavitt Lake Planning Area, Mt. Olsen Roadless area, and Hoover Extension Area.

5. A lower limit of 9,000 MBF of timber harvesting per year from periods 1 through 8. A lower limit must be used to force FORPLAN to schedule timber harvesting activities and outputs. If a lower limit were not set, FORPLAN would not chose to harvest timber. This lower limit of 9,000 MBF represents the 1985 high productivity timber harvesting level.

6. Wilderness areas:

   Existing Hoover Wilderness
   Mokelumme Wilderness Addition
   Carson Wilderness Area

   Recommended Wilderness Areas:

   Sweetwater
   Leavitt Lake
   Excelsior
   Carson Range
   Bald Mountain
   Mt. Charleston
   Bunker Hill
   Southern Toiyabe
   Antelope Peak
   Hoover Further Planning Area
   Hoover Planning Area
   Hunter Creek
   Arc Dome
   Long Valley
   Mt. Ardivey
   Toiyabe Range Peak
   Mt. Jefferson
   Horse Heaven

Table Mountain Georges Canyon
Carson Iceberg Planning Area

Total Acreage = 1,348.0 M acres

TABLE B-21 COMPARISON OF ALTERNATIVE G TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	13.9	13.9	13.9	13.9	13.9
Dispersed Rec (M RVDS)**	-7367.0	-9857.0	-10945.0	-12806.0	-13782.0
Wilderness Rec (M RVDS)**	2114.0	1988.0	1891.0	1891.0	1891.0
Developed Rec (M RVDS)**	1810.0	4330.0	7020.0	8090.0	8810.0
Fishing (M WFUDS)**	-1002.0	-1389.0	-1528.0	-1801.0	-1944.0
Hunting (M WFUDS)**	-642.0	-748.0	-832.0	-969.0	-1040.0
Mgt. Indicator Species (M #'s)	-94.3	-48.9	-68.7	-68.7	-68.7
Habitat Improvement (M acres)	-24.1	-24.1	-24.1	-24.1	-24.1
Livestock (M AUMS)	24.0	100.0	114.0	114.0	114.0
Wild Horse/Burro (M AUMS)	-6.2	-7.2	-8.1	-8.1	-8.1
Fuelwood (MMCF)	.4	.4	.4	.4	.4
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	520.0	520.0	520.0	520.0	520.0
Discounted Benefits ***	-69.0	-46.0	-40.0	-26.0	-17.0
Discounted Costs ***	8.0	6.0	3.0	3.0	2.0
Discounted Net Value ***	-77.0	-51.0	-43.0	-29.0	-19.0

Change in present net value for the Fifty Year Planning Horizon = -220.0

* Programmed timber sales are flatline beyond 50 years
** Valued yield, not supply
*** In millions of dollars

Alternative H
(PNV Assigned Values)

Objective: To maximize net public benefits consistent with resource integration and management requirements (36 CFR Part 219). The net public benefits are "the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not... consistent with the principles of multiple use and sustained yield."

Assumptions: Adequate funding will be available. Viable wildlife population is maintained.

FORPLAN Objective Function: To maximize PNV for using market and assigned values and all costs for the entire planning horizon (at a 4% discount rate).

FORPLAN Constraints:

1. **Wilderness areas**:

    Existing Hoover Wilderness
    Carson Iceberg Wilderness
    Mokelumme Wilderness Addition

    Additional Wilderness areas selected by FORPLAN:

    Leavitt Lake
    Sherman Peak
    Elkhorn
    South Shoshone
    Willow Creek
    Bade Creek
    Toiyabe Range Peak
    Southern Toiyabe
    Toquima Cave
    Sams Canyon
    Iron Springs-Wildcat Peak
    Mt. Jefferson
    Silver Creek
    Fitzpatrick Spring
    Brock Canyon
    Horse Heaven
    Rock Canyon
    Big Ten
    Antelope
    Warm Springs
    Mt. Charleston
    Carson Iceberg Planning Area
    Marble Falls
    Paradise Peak
    North Shoshone
    Mt. Ardivey
    Bobscott
    Bunker Hill
    Marysville Creek
    Bank Spring
    Clipper Gap
    Mud Springs-Boulder
    North Moores Creek
    Mariposa
    Sagehen
    Antelope Peak
    Bald Mountain
    Table Mountain
    Big White Sage
    Georges Canyon
    Saulsbury
    Red Peak
    Arc Dome

    Total Acreage = 1,464.2 M acres

TABLE B-22 COMPARISON OF ALTERNATIVE H TO THE MAXIMUM PRESENT NET VALUE (ASSIGNED VALUES) BENCHMARK

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)*	0.0	0.0	0.0	0.0	0.0
Dispersed Rec (M RVDS)**	0.0	0.0	0.0	0.0	0.0
Wilderness Rec (M RVDS)**	0.0	0.0	0.0	0.0	0.0
Developed Rec (M RVDS)**	0.0	0.0	0.0	0.0	0.0
Fishing (M WFUDS)**	0.0	0.0	0.0	0.0	0.0
Hunting (M WFUDS)**	0.0	0.0	0.0	0.0	0.0
Mgt. Indicator Species (M #'s)	0.0	0.0	0.0	0.0	0.0
Habitat Improvement (M acres)	0.0	0.0	0.0	0.0	0.0
Livestock (M AUMS)	0.0	0.0	0.0	0.0	0.0
Wild Horse/Burro (M AUMS)	0.0	0.0	0.0	0.0	0.0
Fuelwood (MMCF)	0.0	0.0	0.0	0.0	0.0
Water (M Ac-Ft)	0.0	0.0	0.0	0.0	0.0
Operating Plans (numbers)	0.0	0.0	0.0	0.0	0.0
Discounted Benefits ***	0.0	0.0	0.0	0.0	0.0
Discounted Costs ***	0.0	0.0	0.0	0.0	0.0
Discounted Net Value ***	0.0	0.0	0.0	0.0	0.0

Change in present net value for the Fifty Year Planning Horizon = 0.0

* Programmed timber sales are flatlined beyond 50 years
** Valued yield, not supply
*** In millions of dollars

CONSTRAINT EXPLANATIONS

Many of the outputs or activities were constrained from periods 2 through 8, rather than from periods 1 through 8. This was necessary due to the differences in the way FORPLAN handles the first period of directly entered data, as opposed to the data in the yield files. When FORPLAN selected a value from the yield file, it halved that value to report it for the next five years, instead of for the whole period (10 years). When a value was selected from the directly entered data, the whole value was reported. Therefore, FORPLAN calculates a lower value for some of the activities and outputs in the first period than what they actually are.

ALTERNATIVES NOT CONSIDERED IN DETAIL

In August, 1984, an "Array of Alternatives" was developed for the Forest. Four of these alternatives were eliminated from a detailed analysis, due to their similarity in activities and outputs of two other alternatives considered in detail. These four alternatives were:

1. Provisional Alternative F-1 - This alternative had the same objective and assumptions as Alternative P. Both had virtually the same outputs with the exception of permitted livestock use and Wild Horse/Burro AUM's. This alternative was modified to produce P, which increased livestock AUM's, and lowered the wild free roaming horse/burro AUM's.

2. Provisional Alternative H-1 - This alternative had similar wilderness, timber, and range outputs to alternative G. The only difference was the mix of wilderness areas.

3. Provisional Alternative P-1 - This alternative was the same as Alternative P except for the timber constraints. The non-declining yield constraint was removed the first period cut was increased to 35% above 4.5 MMBF, and a flow constraint was set for the remaining decades to not allow timber harvesting to decrease 25% or increase 35% of timber harvested the previous period. This alternative's objective was to improve the age class distribution however, it did not improve. All other activities and outputs remained the same with the exception of timber (See Appendix E for more information on this alternative).

4. Alternative A-1 - This alternative was designed to produce a mix of goods and services that could be produced with a constrained budget based on fiscal years 1980-1982. This alternative would not meet minimum management requirements (MMR) with regards to long term soil productivity. Soil productivity would not be maintained due to only 85% of the unsatifactory rangelands being brought into the satisfactory class by 2030.

SUMMARY OF ALTERNATIVE DEVELOPMENT PROCESS

Prior to alternative development, benchmark runs established maximum resource and PNV potential of the Forest. Alternative outputs could not exceed these parameters.

Alternatives were designed to answer the planning questions developed by consolidating the public issues and management concerns. Additional alternatives were based on Region 4 and Washington Office direction to aid in the anlysis process.

Output levels, costs, and benefits from the alternative runs were compared to determine if a "range" of outputs was included and how responsive these alternatives were to issues and concerns.

ESTIMATING EFFECTS OF BENCHMARKS, DISCRETIONARY CONSTRAINTS, AND ALTERNATIVES

INTRODUCTION

NFMA regulations (36 CFR 219.12(g)) require that..."the physical, biological, economic and social effects of implementing alternatives shall be displayed and compared in the environmental statement." The purpose of land and resource management planning is to produce a land management plan that provides for multiple use and sustained yields of goods and services from the Toiyabe National Forest in a manner that maximizes long-term net public benefits in an environmentally sound manner. Priced yields, non-priced yields, and environmental effects had to be calculated and compared before an alternative could be selected which best met the objectives of land and resource management planning.

EVALUATION OF 90% OF LRSY GROWTH CONSTRAINT

Since Version II of FORPLAN does no have the ability to calculate growth of timber stands, an analysis of having the stands growth rate at or above 90% of the Stands potential by the year 2030, is not possible. An analysis of Rudy J. Verschoor's paper on Evaluating the 90% of LRSY Growth Constraint in Forest Planning shows that for the Toiyabe, with uneven age class distribution, the 90% of LRSY requirement may not be appropriate. The Toiyabe has an abundance of stands in the 60 to 90 year age classes and very few stands in ages 40 or less.

In order to meet the growth at 90% of LRSY, much greater levels of thinning and stand density control would be needed, as well as much more planting. This would cause a drop in PNW due to increased costs of doing the additional work being applied to the same revenues. The overall return to the U.S. Treasury would also be less.

TRADE-OFF ANALYSIS

Trade-offs between outputs can be computed through a linear programming (LP) model such as FORPLAN by systematically varing the objective for one of the outputs of an alternative, where the resulting trade-off with the output measured by the LP objective function is determined. In the November 1984, Journal of Forestry article, "Applying Tradeoff Analysis to National Forest Planning," Kent P. Connaughton and Roger D. Fight state that "Trade-offs can not be reliably computed from the differences between land management alternatives." They further add that trade-off analysis may be overstated when inputs such as land is manipulated instead of outputs, or when a sufficiently wide range of management rigimes is not provided to the model. They conlcude that a trade-off analysis is only as good as the confidence that is placed on the production relationships that are being modeled for the Forest.

COST EFFECTIVENESS OF CONSTRAINTS

As discussed in Appendix B, VI and VII, some common constraints were used in the Toiyabe's Analysis of benchmarks and alternatives. These were designed to meet legal and/or 36 CFR 219 requirements. Therefore they were not considered optional. No "sensitivity" analysis was done for these common constraints.

The constraints used to reach individual benchmark and alternative objectives were not subjected to formal sensitivity analysis due to cost and time.

However, the effects of these sets of constraint applications can be seen by comparing the output levels and the costs between alternatives. The following tables aid in this comparison.

TABLE B-23 lists resource yields, activities, costs and benefits for the nine alternatives.

TABLE B-24 displays the increasing Present Value Cost and the non-priced outputs by alternative.

TABLE B-25 displays the decreasing Present Net Value and priced outputs by alternative.

TABLE B-23 Resource Yields, Activities, Costs and Benefits by Alternative

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

YIELD/ACTIVITY (by decade)	Method of Measure	ALTERNATIVES								
		A	B	C	D	E	P	F	G	H
RECREATION										
Developed recreation	M RVDS/ yr									
Decade 1		892.	1092.	902.	1092.	892.	1096.	909.	1090.	909.
2		544.	1142.	708.	1052.	693.	1125.	716.	1152.	719.
3		456.	1208.	478.	1130.	494.	1171.	492.	1194.	492.
4		456.	1314.	478.	1256.	511.	1246.	513.	1322.	513.
5		456.	1386.	478.	1342.	511.	1315.	515.	1394.	513.
10		456.	1551.	478.	1465.	511.	1447.	513.	1559.	513.
15		456.	1561.	478.	1475.	511.	1457.	513.	1569.	513.
Dispersed recreation	M RVDS/yr									
Decade 1		1591.	2169.	1553.	1962.	1423.	1807.	1387.	1303.	2040.
2		1892.	2397.	2067.	2397.	1683.	2094.	1953.	1401.	2397.
3		2088.	2578.	2403.	2578.	1864.	2417.	2153.	1484.	2578.
4		2098.	2764.	2403.	2764.	1864.	2417.	2153.	1484.	2764.
5		2088.	2764.	2403.	2764.	1864.	2417.	2153.	1484.	2764.
10		2088.	2362.	2403.	2782.	1864.	2417.	2153.	1484.	2862.
15		2088.	2362.	2403.	2782.	1864.	2417.	2153.	1484.	2862.
WILDLIFE AND FISHERIES	(50 yrs)									
Wildlife Habitat improvement	M acres	99.0	165.0	111.9	144.9	135.4	170.0	66.5	34.5	158.0
Management Indicator species	M animal									
Goshawk (pairs)	breed pr	3000.0	1800.0	3360.0	2110.0	2690.0	3300.0	3950.0	3950.0	2121.0
Pine Marten	M animal	32.0	24.5	52.0	23.5	43.1	47.5	64.6	60.0	42.0
Williamson's Sapsucker	"	139.0	107.0	196.0	118.0	156.0	171.0	202.0	203.0	132.0
Hairy Woodpecker	"	174.0	169.0	286.0	203.0	205.0	252.0	290.0	266.0	198.0
Mule Deer	"	1577.0	1645.0	1492.0	1620.0	1264.0	1375.0	1337.0	1306.0	1390.0
Sage Grouse	"	750.0	715.0	1146.0	715.0	750.0	1130.0	865.0	783.0	770.0
Yellow warbler	"	239.0	227.0	338.0	227.0	247.0	280.0	300.0	277.0	244.0
Palmer's Chipmunk	"	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
Yellow-bellied Sapsucker	"	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
Piute Cutthroat Trout	M fish/ stream/ mile	20.1	17.5	5.4	21.3	14.2	21.5	18.5	15.4	15.2
Lahontan Cutthroat Trout	"	19.8	16.7	4.9	17.0	12.8	21.4	17.5	15.0	14.5
Dispersed Wildlife Use	(50 Years)									
General Forest Use	MM WFUDS	11.4	39.2	21.9	27.8	19.2	27.7	13.2	12.5	33.3
Wilderness		6.0	4.4	9.3	5.3	6.1	4.0	12.9	11.1	7.6

TABLE B-23 Resource Yields, Activities, Costs and Benefits by Alternative

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

YIELD/ACTIVITY (by decade)	Method of Measure	ALTERNATIVES								
		A	B	C	D	E	P	F	G	H
TIMBER										
Base Harvest	MMBF/Yr									
Decade 1		6.0	12.0	2.0	9.0	0	4.5	0	9.0	0
2		6.0	12.0	2.0	9.0	0	4.5	0	9.0	0
3		6.0	12.0	2.0	9.0	0	4.5	0	9.0	0
4		6.0	12.0	2.0	9.0	0	4.5	0	9.0	0
5		6.0	12.0	2.0	9.0	0	4.5	0	9.0	0
10		6.0	12.0	2.0	9.0	0	4.5	0	9.0	0
15		6.0	12.0	2.0	9.0	0	4.5	0	9.0	0
Base Harvest	MMCF/yr									
Decade 1		.9	1.9	.31	1.4	0	.69	0	1.4	0
2		.9	1.9	.31	1.4	0	.69	0	1.4	0
3		.9	1.9	.31	1.4	0	.69	0	1.4	0
4		.9	1.9	.31	1.4	0	.69	0	1.4	0
5		.9	1.9	.31	1.4	0	.69	0	1.4	0
10		.9	1.9	.31	1.4	0	.69	0	1.4	0
15		.9	1.9	.31	1.4	0	.69	0	1.4	0
Fuelwood	(50 yrs) MMCF	29.1	32.0	21.0	29.0	27.0	29.4	18.0	25.5	23.5
Long term sustained yield	MMCF/yr	1.1	21.1	1.4	1.8	0	1.5	0	1.5	0
Christmas Trees (50 yrs)	M each	195.9	126.3	47.6	211.9	84.8	65.0	24.2	255.4	24.2
Pinyon Pine Nuts (50 yrs)	M lbs	6249.0	3792.2	3773.4	4475.0	4065.3	3888.1	3941.2	5345.4	3073.2
Posts & Poles (50 yrs)	M each	25.1	28.8	20.1	25.8	29.4	26.0	8.7	23.9	8.7
Reforestation	M acres/ yr									
Decade 1		.62	1.0	.17	.75	.02 1/	.52	.02 1/	.76	.02 1/
2		.24	.47	.18	.39	.02 1/	.21	.02 1/	.33	.02 1/
3		.16	.37	.15	.26	.02 1/	.15	.02 1/	.27	.02 1/
4		.16	.43	.09	.27	.02 1/	.11	.02 1/	.30	.02 1/
5		.09	.51	.07	.13	.02 1/	.11	.02 1/	.40	.02 1/
10		.38	.59	.17	.52	.02 1/	.31	.02 1/	.50	.02 1/
15		.31	.56	.14	.47	.02 1/	.26	.02 1/	.46	.02 1/
RANGE										
livestock use	M AUMS/ yr									
Decade 1		98.4	100.0	94.0	95.0	95.0	98.0	94.0	96.0	94.0
2		98.4	100.0	91.8	99.1	95.4	98.1	92.3	102.7	92.6
3		98.4	100.7	91.7	100.0	95.0	99.0	92.3	104.0	92.5
4		98.3	100.7	91.7	100.0	95.0	99.0	92.3	104.0	92.5
5		98.4	100.7	91.7	100.0	95.0	99.0	92.3	104.0	92.5
10		98.4	100.7	91.7	100.0	95.0	99.0	92.3	104.0	92.5
15		98.4	100.7	91.7	100.0	95.0	99.0	92.3	104.0	92.5

1/ Due to non-regulated products

TABLE B-23 Resource Yields, Activities, Costs and Benefits by Alternative

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

YIELD/ACTIVITY (by decade)	Method of Measure	ALTERNATIVES								
		A	B	C	D	E	P	F	G	H
Wild Horse/Burro	M AUMS/ yr									
Decade 1		4.3	7.5	6.4	5.4	4.7	5.1	5.3	5.0	5.6
2		4.3	7.5	6.7	5.4	4.6	5.1	5.5	5.1	5.8
3		4.2	7.5	6.8	5.4	4.6	5.1	5.6	5.0	5.8
4		4.2	7.5	6.9	5.4	4.6	5.1	5.6	5.0	5.8
5		4.2	7.5	6.8	5.4	4.6	5.1	5.6	5.0	5.8
10		4.2	7.5	6.8	5.4	4.6	5.1	5.6	5.0	5.8
15		4.2	7.5	6.8	5.4	4.6	5.1	5.6	5.0	5.8
MINERALS										
Operating Plans	# Plans/ yr									
Decade 1		252.	264.	237.	252.	238.	256.	213.	265.	213.
2		252.	264.	237.	252.	238.	256.	213.	265.	213.
3		252.	264.	237.	252.	238.	256.	213.	265.	213.
4		252.	264.	237.	252.	238.	256.	213.	265.	213.
5		252.	264.	237.	252.	238.	256.	213.	265.	213.
10		252.	264.	237.	252.	238.	256.	213.	265.	213.
15		252.	264.	237.	252.	238.	256.	213.	265.	213.
Acres Reclaimed	M acres/ yr									
Decade 1		.48	.9	.82	.72	.48	.91	.59	.54	.65
2		.48	.9	.82	.72	.48	.91	.59	.54	.65
3		.48	.9	.82	.72	.48	.91	.59	.54	.65
4		.48	.9	.82	.72	.48	.91	.59	.54	.65
5		.48	.9	.82	.72	.48	.91	.59	.54	.65
10		.48	.9	.82	.72	.48	.91	.59	.54	.65
15		.48	.9	.82	.72	.48	.91	.59	.54	.65
Acres Disturbed	M acres/ yr									
Decade 1		1.36	1.43	1.27	1.34	1.21	1.34	1.12	1.38	1.12
2		1.36	1.43	1.27	1.34	1.21	1.34	1.12	1.38	1.12
3		1.36	1.43	1.27	1.34	1.21	1.34	1.12	1.38	1.12
4		1.36	1.43	1.27	1.34	1.21	1.34	1.12	1.38	1.12
5		1.36	1.43	1.27	1.34	1.21	1.34	1.12	1.38	1.12
10		1.36	1.43	1.27	1.34	1.21	1.34	1.12	1.38	1.12
15		1.36	1.43	1.27						
LANDS	(50 yrs)									
Land Purchase and Acquisition	M acres	18.0	40.0	18.0	60.0	13.0	35.0	30.0	30.0	40.0
WATER	(50 yrs)									
Meeting Water Quality Standards	M Ac-Ft	4660.	4660.	4660.	4660.	4660.	4660.	4660.	4660.	4660.

TABLE B-23 Resource Yields, Activities, Costs and Benefits by Alternative

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

YIELD/ACTIVITY	Method of Measure	ALTERNTIVES								
		A	3	C	D	E	P	F	G	H
ROADS										
Arterial/Collecter Construction	Miles/ yr									
Decade 1		1.7	5.5	0.	3.7	0.	.8	1.0	4.4	0.
2		1.2	3.8	0.	2.7	0.	.6	1.5	3.6	0.
3		.9	2.2	.05	1.9	0.	.7	1.5	2.6	0.
4		1.0	1.7	.4	2.0	0.	.9	1.5	1.5	0.
5		.4	1.5	.4	1.5	0.	.7	1.5	1.6	0.
Arterial/Collector Construction	Miles/ yr									
Decade 1		7.0	28.2	17.8	28.2	0.	18.6	0.	28.0	26.5
2		7.7	30.0	17.9	29.5	0.	18.9	0.	28.8	26.5
3		6.3	31.7	18.0	30.3	0.	18.8	0.	29.8	26.5
4		7.5	32.6	17.5	30.1	0.	19.5	0.	30.9	26.5
5		7.9	33.3	17.6	31.0	0.	16.9	0.	31.4	26.5
Timber Purchaser Road Construction	Miles/ yr									
Decade 1		3.5	8.7	0.	5.9	0.	1.3	0.	6.2	0.
2		2.2	6.1	0.	4.3	0.	1.0	0.	5.1	0.
3		1.5	3.5	.07	3.0	0.	1.1	0.	3.5	0.
4		2.0	2.7	.7	3.1	0.	1.4	0.	2.2	0.
5		1.2	2.3	.7	2.3	0.	1.0	0.	2.4	0.
Timber Purchase Road Reconstruction	Miles/ yr									
Decade 1		2.7	1.8	.7	1.3	0.	2.6	0.	1.6	0.
2		3.0	3.9	1.5	3.3	0.	3.0	0.	2.5	0.
3		4.0	5.8	1.6	4.2	0.	2.9	0.	3.7	0.
4		2.8	6.7	1.1	3.9	0.	2.5	0.	4.9	0.
5		3.5	7.6	1.1	4.9	0.	3.0	0.	5.5	0.
WILDERNESS										
Wilderness Recreation	M RVDS/yr									
Decade 1		442.4	100.1	934.1	585.4	494.9	630.0	1059.3	974.8	763.4
2		442.4	100.1	1009.6	642.1	652.6	674.4	1154.5	1057.6	858.8
3		442.4	100.1	1076.2	693.6	693.3	718.5	1236.8	1130.1	941.0
4		442.4	100.1	1076.2	693.6	693.3	718.5	1236.8	1130.1	941.0
5		442.4	100.1	1076.2	693.6	693.3	718.5	1236.8	1130.1	941.0
10		442.4	100.1	1076.2	693.6	693.3	718.5	1236.8	1130.1	941.0
15		442.4	100.1	1074.2	693.6	693.3	718.5	1236.8	1130.1	941.0

TABLE B-23 Resource Yields, Activities, Costs and Benefits by Alternative

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

COSTS 1978 Dollars (by decade)	Method of Measure	ALTERNATIVES								
		A	B	C	D	E	P	F	G	H
Budget to Implement	Million $/yr									
Decade 1		4.5	7.0	5.0	6.3	3.4	6.0	3.8	6.2	5.2
2		4.5	7.0	5.0	6.3	3.4	6.0	3.8	6.2	5.2
3		4.4	7.0	5.0	6.3	3.4	6.1	3.8	6.2	5.2
4		4.4	7.1	5.0	6.3	3.4	6.0	3.8	6.3	5.2
5		4.4	7.2	5.0	6.4	3.4	6.1	3.7	6.4	5.2
Transportation Appropriated Dollars	Thousand $yr									
Decade 1		328.0	1360.0	697.0	1231.0	162.	759.0	162.	1272.0	917.3
2		320.2	1266.4	703.6	1182.8	162.	785.3	162.	1214.2	917.3
3		318.7	1260.1	708.8	1193.1	162.	795.9	162.	1190.3	917.3
4		328.1	1245.3	727.7	1181.7	162.	798.4	162.	1161.0	917.3
5		325.4	1187.9	708.1	1171.1	162.	787.6	162.	1217.9	917.3
Purchaser Credit Roads	"									
Decade 1		95.0	199.0	25.0	145.0	0.	66.0	0.	147.0	0.
2		82.7	176.1	30.9	138.0	0.	67.9	0.	138.3	0.
3		89.1	170.9	33.1	133.0	0.	66.7	0.	131.2	0.
4		91.2	180.6	34.4	132.8	0.	67.3	0.	135.5	0.
5		94.6	191.3	31.0	140.1	0.	66.9	0.	160.2	0.
Capital Investment (except roads)	Million $/yr									
Decade 1		.44	1.33	.48	1.00	.17	.98	1.05	.46	1.03
2		.40	1.04	.43	.88	.15	.71	.75	.41	.74
3		.38	1.02	.45	.79	.17	.67	.74	.43	.72
4		.37	1.02	.41	.83	.17	.61	.77	.43	.63
5		.36	1.05	.42	.80	.15	.64	.76	.40	.67
Operation & Maintenance	"									
Decade 1		3.18	3.75	3.37	3.22	2.46	4.14	2.72	3.65	3.20
2		3.16	3.89	3.44	3.67	2.69	4.22	2.78	3.70	3.51
3		3.12	3.97	3.43	3.74	2.66	4.30	2.75	3.75	3.48
4		3.12	4.01	3.43	3.78	2.67	4.33	2.76	3.79	3.50
5		3.12	4.09	3.43	3.85	2.67	4.40	2.76	3.87	3.50

TABLE 6-23 Resource Yields, Activities, Costs and Benefits by Alternative

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

BENEFITS (By Decade) 1978 dollars	Method of Measure	ALTERNATIVES								
		A	B	C	D	E	P	F	G	H
Wilderness Recreation	Million $/yr									
Decade 1		3.54	.80	7.47	4.68	5.91	5.04	8.47	7.80	6.11
2		3.54	.80	8.07	5.14	6.23	5.40	9.24	8.46	6.37
3		3.54	.80	8.61	5.55	6.56	5.75	9.39	9.04	7.53
4		3.54	.80	8.61	5.55	6.56	5.75	9.89	9.04	7.53
5		3.54	.80	8.61	5.55	6.56	5.75	9.89	9.04	7.53
10		3.54	.80	8.61	5.55	6.56	5.75	9.89	9.04	7.53
15		3.54	.80	8.61	5.55	6.56	5.75	9.89	9.04	7.53
Wildlife(W=UDS)	"									
Decade 1		7.02	9.91	10.55	10.07	8.79	10.83	10.00	8.48	12.62
2		6.98	10.92	12.65	12.68	9.95	12.67	12.25	9.30	13.64
3		6.99	11.72	13.93	13.56	10.67	14.22	13.63	9.87	14.66
4		6.99	12.54	14.07	14.38	10.67	14.22	13.63	9.87	15.49
5		6.99	12.97	14.07	14.81	10.67	14.22	13.63	9.87	15.91
10		6.99	12.97	14.07	14.81	10.67	14.22	13.63	9.87	15.91
15		6.99	12.97	14.07	14.81	10.67	14.22	13.63	9.87	15.91
	"									
Returns to U.S. Government		Million Dollars Per Year								
Decade 1		1.30	.83	1.13	.98	.75	1.59	.75	.98	.75
2		1.26	1.25	.88	1.18	.84	1.60	.82	1.20	.82
3		1.24	1.26	.83	1.19	.80	1.61	.77	1.23	.77
4		1.24	1.29	.83	1.20	.80	1.62	.77	1.28	.78
5		1.24	1.26	.83	1.22	.80	1.62	.77	1.26	.73
Returns to State										
Decade 1		.46	.30	.24	.38	.23	.53	.23	.38	.23
2		.45	.43	.29	.41	.28	.53	.27	.42	.27
3		.45	.44	.28	.41	.26	.54	.27	.42	.26
4		.45	.44	.28	.41	.26	.54	.26	.43	.26
5		.45	.43	.27	.41	.26	.54	.26	.43	.26

TABLE B-23 Resource Yields, Activities, Costs and Benefits by Alternative

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

BENEFITS (by decade) 1975 dollars	Method of Measure	ALTERNATIVES								
		A	B	C	D	E	P	F	G	H
Total Benefits	Million $/yr									
Decade 1		25.41	25.34	29.14	28.21	25.19	27.64	28.89	27.35	31.18
2		23.80	27.19	32.77	35.70	27.35	31.50	32.72	29.41	33.45
3		25.55	28.72	34.91	34.85	27.84	33.78	34.97	30.94	34.93
4		25.55	30.39	35.04	36.58	27.89	34.88	35.03	31.32	36.42
5		25.55	30.98	35.02	37.25	27.89	35.43	35.03	31.51	36.85
10		25.55	31.00	35.07	37.64	27.89	35.89	35.03	31.99	36.85
15		25.55	30.90	35.06	37.58	27.89	35.89	35.03	31.92	36.85
Sawtimber	"									
Decade 1		.34	.67	.11	.50	0.	.26	0.	.50	0.
2		.35	.63	.12	.51	0.	.26	0.	.51	0.
3		.34	.62	.13	.50	0.	.26	0	.51	0.
4		.35	.59	.12	.47	0.	.26	0.	.50	0.
5		.34	.53	.10	.45	0.	.24	0.	.48	0.
10		.34	.55	.15	.48	0.	.30	0.	.46	0.
15		.34	.45	.14	.38	0.	.27	0.	.36	0.
Other Timber Benefits 2/	MM$ /50 yr	5.1	4.9	3.5	4.7	4.3	4.5	3.2	4.7	3.5
Developed Recreation	"									
Decade 1		2.67	3.28	2.71	3.01	2.68	3.29	2.73	3.27	2.73
2		1.63	3.43	2.12	3.16	2.08	3.37	2.16	3.46	2.16
3		1.37	3.62	1.43	3.39	1.48	3.51	1.48	3.58	1.48
4		1.37	3.94	1.43	3.77	1.53	3.74	1.54	3.97	1.54
5		1.37	4.16	1.43	4.03	1.53	3.94	1.54	4.18	1.54
10		1.37	4.65	1.43	4.39	1.53	4.34	1.54	4.68	1.54
15		1.37	4.68	1.43	4.43	1.53	4.37	1.54	4.71	1.54
Dispsersed Recreation	"									
Decade 1		4.77	6.51	4.67	5.89	4.27	5.42	4.16	3.91	6.12
2		5.68	7.19	6.20	7.19	5.05	6.28	5.56	4.20	7.19
3		6.27	7.73	7.21	7.73	5.59	7.25	6.46	4.45	7.73
4		6.27	8.29	7.21	8.29	5.59	7.25	6.46	4.45	8.29
5		6.27	8.29	7.21	8.29	5.59	7.25	6.46	4.45	8.29
10		6.27	8.29	7.21	8.29	5.59	7.25	6.46	4.45	8.29
15		6.27	8.29	7.21	8.29	5.59	7.25	6.46	4.45	8.29
Permitted Livestock Use										
Decade 1		1.29	1.26	1.23	1.25	1.25	1.31	1.23	1.26	1.23
2		1.29	1.31	1.20	1.30	1.25	1.31	1.21	1.35	1.22
3		1.29	1.32	1.20	1.31	1.25	1.31	1.21	1.36	1.21
4		1.29	1.32	1.20	1.31	1.25	1.31	1.21	1.36	1.21
5		1.29	1.32	1.20	1.31	1.25	1.31	1.21	1.36	1.21
10		1.29	1.32	1.20	1.31	1.25	1.31	1.21	1.36	1.21
15		1.29	1.32	1.20	1.31	1.25	1.31	1.21	1.36	1.21

2/ Includes Christmas trees, pinyon nuts, posts & poles, and fuelwood

TABLE B-23 Resource Yields, Activities, Costs and Benefits by Alternative

RESOURCE YIELDS, ACTIVITIES, COSTS AND BENEFITS

ECONOMIC INDICATORS (By Decade) 1978 Dollars	Method of Measure	ALTERNATIVES								
		A	B	C	D	E	P	F	G	H
Present Value Benefits	Million									
Total (4%)	$/50 yrs	479.7	330.9	735.2	971.6	578.5	726.8	733.6	660.5	858.7
Timber		7.4	13.8	2.6	10.8	0	5.6	0	11.0	0
Other Timber 2/		2.3	2.1	1.5	2.0	1.9	2.0	1.4	2.0	1.5
Recreation		162.9	235.9	181.0	224.9	154.3	216.5	163.9	166.0	202.4
Wilderness		77.1	17.5	175.9	111.9	136.2	112.7	201.0	184.3	149.2
Wildlife		152.3	241.2	270.2	266.9	220.8	260.8	260.3	201.1	302.4
Range		28.1	28.3	26.5	28.1	2.8	2.8	26.7	28.9	26.7
Present Value Benefits Total (7 1/8 %)	"	268.6	465.3	411.7	544.1	324.0	482.0	410.8	369.9	480.9
Present Value Costs (4%)	"	97.6	153.5	110.3	137.7	74.4	131.3	82.6	136.1	114.4
" (7 1/8%)		54.7	86.0	61.8	77.1	41.7	84.7	46.3	76.2	64.1
Present Net Values (4%)	"	382.1	609.7	624.9	653.9	497.4	595.5	651.0	524.4	744.4
(7 1/8%)		214.0	341.4	350.0	366.2	278.5	377.1	364.6	293.7	416.9
Benefits/Costs (4%)	"	4.9/1	5.4/1	6.7/1	7.1/1	7.8/1	5.5/1	8.8/1	5.1/1	7.5/1
		..........Net Increase or Decrease from No Action Alternative (A)..........								
Income	M $/Decade									
Decade 1		0	6.78	-6.32	4.71	-8.72	4.21	-.44	-3.11	-5.83
2		0	9.94	2.73	8.04	-1.81	6.77	1.41	4.76	5.53
Employment	# Jobs									
Decade 1		0	353.	-334.	252.	-463.	244.	16.	-192.	-292.
2		0	523.	182.	430.	-81.	377	120.	223.	369.

2/ Includes Christmas trees, pinyon nuts, posts & poles, and fuelwood.

TABLE B-24 INCREASING PRESENT VALUE COST AND NON-PRICED OUTPUTS
(1978 Dollars Inflated to 1982 Dollars)
(ALL DOLLARS IN MM$ - TEN YEAR PERIOD TOTAL)

Alternatives		PNV	PVC	PVR	DEER NUMBERS	FISH M-LBS	WLDRNSS M-ACRES	ROS-SPM M-ACRES	ROS-SPNM M-ACRES	JOB 1 INCREASE DECREASE	RETURNS U.S. MM$	RETURNS STATES MM$
ALTERNATIVE	E	661.4	98.9	760.4								
1985					28,000	67.3	303.7	1087.1	1378.1	-462	1.0	0.3
1995					281,000	131.4	303.7	1087.1	1378.1	-81	11.2	3.7
2005					281,000	139.4	303.7	1087.1	1378.1		10.6	3.5
2015					281,000	139.4	303.7	1087.1	1378.1		10.6	3.5
2030					281,000	139.4	303.7	1087.1	1378.1		10.6	3.5
Difference:		204.4	10.9	215.3								
ALTERNATIVE	F	865.8	109.8	975.7								
1985					29,000	132.4	1986.4	1087.1	1378.1		1.0	0.3
1995					303,000	159.4	1986.4	1047.1	1413.1		10.9	3.6
2005					303,000	175.3	1986.4	1027.1	1433.1		10.3	3.4
2015					303,000	175.3	1986.4	1007.1	1453.1		10.3	3.4
2030					303,000	175.3	1986.4	987.1	1478.1		10.3	3.4
Difference:		-357.6	20.0	-337.7								
ALTERNATIVE	A	508.2	129.8	638.0								
1985					28,000	113.5	303.6	1087.1	1378.1	0	1.2	0.5
1995					279,000	125.6	303.6	1087.1	1378.1	0	13.3	4.5
2005					277,000	144.6	303.6	1087.1	1378.1		13.0	4.4
2015					277,000	144.6	303.6	1087.1	1378.1		12.9	4.4
2030					277,000	144.6	303.6	1087.1	1378.1		13.2	4.4
Difference:		322.8	16.9	339.8								
ALTERNATIVE	C	831.0	146.7	977.8								
1986					32,000	145.7	1144.1	1087.1	1378.1	-334	1.5	0.3
1995					319,000	155.6	1144.1	1117.1	1323.1	191	11.7	3.9
2005					317,000	179.3	1144.1	1132.1	1298.1		11.1	3.7
2015					317,000	179.3	1144.1	1147.1	1273.1		11.1	3.7
2030					317,000	179.3	1144.1	1152.1	1263.1		11.0	3.6
Difference:		159.0	5.3	164.3								

TABLE B-24 (cont.)

Alternatives		PNV	PVC	PVB	DEER NUMBERS	FISH M-LBS	WLDRNSS M-ACRES	ROS-SPM M-ACRES	ROS-SPNM M-ACRES	JOB[1] INCREASE DECREASE	RETURNS U.S. MM$	RETURNS STATES MM$
ALTERNATIVE	H	990.0	152.0	1142.1								
1986					29,000	155.6	1497.6	1087.1	1378.1		1.0	0.3
1995					320,000	145.0	1497.6	1087.1	1378.1		10.9	3.6
2005					333,000	243.0	1497.6	1087.1	1378.1		10.3	3.4
2015					333,000	243.0	1497.6	1087.1	1378.1		10.4	3.4
2030					333,000	243.0	1497.6	1087.1	1378.1		10.4	3.4
Difference		-149.2	12.8	-136.4								
ALTERNATIVE	P	840.8	164.8	1005.7								
1986					29,000	142.4	211.5	1056.1	1409.1	244	2.3	0.4
1995					325,000	160.3	211.5	1056.1	1409.1	377	22.8	4.7
2005					336,000	192.4	211.5	1056.1	1409.1		22.8	4.7
2015					336,000	192.4	211.5	1056.1	1409.1		22.9	4.8
2030					336,000	192.4	211.5	1056.1	1409.1		22.8	4.8
Difference:		-143.5	16.2	-76.4								
ALTERNATIVE	G	697.3	181.0	929.3								
1986					29,000	103.5	1346.6	1087.1	1378.1		1.3	0.5
1995					271,000	123.7	1346.6	1031.1	1339.1		16.0	5.6
2005					264,000	131.6	1346.6	1003.0	1322.0		16.4	5.6
2015					264,000	131.6	1346.6	975.0	1305.0		17.0	5.7
2030					264,000	131.6	1346.6	947.0	1286.0		16.7	5.7
Difference:		172.3	2.1	123.5								
ALTERNATIVE	C	869.6	183.1	1052.8								
1986					29,000	104.6	522.8	1087.1	1378.1	252	1.3	0.5
1995					321,000	109.3	522.8	939.5	1070.0	430	15.7	5.4
2005					333,000	124.6	522.8	715.7	918.9		15.8	5.4
2015					333,000	124.6	522.8	591.9	767.5		16.0	5.5
2030					333,000		522.8	468.1	621.0		16.2	5.5
Difference:		-59.3	21.2	-37.7								
ALTERNATIVE	B	810.3	204.2	1015.1								
1986					29,000	231.4	0.0	1087.1	1378.1	353	1.1	0.4
1995					316,000	233.5	0.0	795.5	991.1	522	16.6	5.7
2005					326,000	253.4	0.0	649.7	800.1		16.8	5.8
2015					326,000	253.4	0.0	503.9	609.1		17.1	5.8
2030					326,000	253.4	0.0	358.1	423.1		16.7	5.7

[1] Compared to no action

TABLE 3-25 Decreasing Present Net Value and Priced Outputs by Alternatives
(1978 Dollars Inflated to 1/1/82)
Figures Shown in MM$
Discount Rate is 4%

				PVB by Resources						PVC by Major Cost Categories								
	PNV	PVC	PVB	Rec.	Wilder	Fish & Widlf	Grazing	Timber 1/	Other *	S&W	Minerals	Rec.	Wilder	Fish& Widlf	Grazing	Timber 1/	Roads	Other *
BENCHMARKS																		
Min Level	274.2	49.2	323.7	127.5	231.2	172.9	0.0	0.0	39.3	1.6	4.0	4.3	1.3	1.7	0.3	0.9	0.0	35.4
PNV	990.0	152.1	1,142.1	269.2	198.5	402.2	35.5	2.0	234.7	5.1	9.8	14.2	4.2	4.4	9.7	4.5	16.7	83.5
ALTERNATIVES																		
H	990.0	152.1	1,142.1	269.2	198.5	402.2	35.5	2.0	234.7	5.1	9.8	14.2	4.2	4.4	9.7	4.5	16.7	83.5
DIF>	-120.3	31.0	-89.3															
D	869.7	183.1	1,052.8	299.1	148.8	355.0	37.4	17.1	195.4	4.8	9.9	24.9	2.3	4.3	10.4	12.7	28.7	85.1
DIF>	-3.9	-73.3	-77.1															
F	865.8	109.8	975.7	219.0	267.3	346.2	35.5	1.8	106.9	3.9	9.8	10.7	5.0	3.5	9.3	4.3	2.0	61.3
DIF>	-34.7	37.0	2.1															
C	831.1	146.8	977.8	240.7	234.0	359.3	35.3	5.4	103.1	5.6	9.9	12.9	3.6	4.8	9.8	5.5	13.0	81.7
DIF>	-20.2	57.4	127.3															
B	810.9	204.2	1,105.1	313.9	23.3	320.8	37.7	21.2	388.3	5.8	14.9	34.7	1.3	5.8	11.3	16.6	32.9	80.9
DIF>	-19.0	-29.5	-138.5															
P 2/	791.9	174.7	966.6	287.9	149.9	345.9	36.7	10.0	135.2	5.9	12.5	30.4	2.1	4.9	10.9	8.9	16.3	82.8
DIF>	-94.5	6.4	-88.1															
G	697.4	181.1	878.5	220.9	245.1	267.5	38.5	17.3	89.3	2.5	9.9	25.7	4.0	2.4	11.0	13.5	29.7	82.5

TABLE B-25 (cont.)

				PVB by Resources						PVC by Major Cost Categories								
BENCHMARKS	PNV	PVC	PVB	Rec.	Wilder	Fish & Widlf	Grazing	Timber 1/	Other *	S&W	Minerals	Rec.	Wildec	Fish& Widlf	Grazing	Timber 1/	Roads	Other *
DIF>	-35.9	-52.2	-109.1															
E	561.5	93.9	769.4	205.3	181.2	293.6	36.3	2.5	50.6	2.3	9.9	13.5	2.2	2.9	9.0	4.7	2.0	52.4
DIF>	-153.3	30.9	-131.4															
A	508.2	129.8	633.0	216.6	102.5	202.6	37.4	12.9	66.6	2.6	9.8	14.9	1.3	2.9	9.6	10.3	12.1	71.0
DIF>	-6.7	-17.2	-23.9															
P 3/	501.5	112.6	641.1	179.4	94.9	223.2	23.5	6.2	86.9	3.8	9.0	19.7	1.3	3.2	7.0	5.7	10.3	53.6

1/ Included sawtimber, Christmas trees, pinyon nuts, posts & poles, and fuelwood.
2/ At a 4% discount rate
3/ AT a 7.125% discount rate

PNV - Present Net Value
PVC - Present Value Cost
PVB - Present Value Benefit

DIF> The PNV, PVC, and PVB plus or minus difference between one alternative and the next one.

RESOLUTION OF ISSUES, CONCERNS AND OBJECTIVES BY ALTERNATIVE

PLANNING ISSUE 1 :

HOW SHOULD THE VARIOUS RECREATION ACTIVITIES ON THE FOREST BE ALLOCATED TO BEST MEET THE NEEDS OF A VARIETY OF RECREATIONAL VISITORS ?

COMPARISON OF ALTERNATIVES IN RESPONDING TO ISSUE TOPIC 1

A Alternative A would offer a variety of recreational experiences ranging from wilderness to developed recreation. There will be reconstruction of existing sites within this alternative. See Table II-31 for the location and period of new trail head construction/reconstruction. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to Table II-32 on the acreage distribution of the specific ROS acres. This alternative does not meet the demand for developed site use.

B Alternative B would offer a variety of recreational experiences stressing developed recreation and dispersed recreation. There will be construction of seventeen new campgrounds and reconstruction of existing sites within this alternative. This total construction/reconstruction will supply an additional 5,855 PAOTs. In addition to the developed recreation construction, construction/reconstruction of 66 miles of trails will enhance the dispersed recreation resource. See Table II-31 for the period and location of all new recreation construction projects. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to Table II-32 on the acreage distribution of the specific ROS acres.

C Alternative C would offer a variety of recreational experiences mainly wilderness experiences. There will be no new construction or reconstruction of developed recreation sites. Construction/reconstruction of 17.4 miles of new dispersed recreation trails will enhance the dispersed recreation resource. See Table II-31 for trail-head and trail construction/reconstruction period and location. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to Table II-32 on the acreage distribution of the specific ROS acres. This alternative does not meet the demand for developed site use.

D Alternative D would offer a variety of recreational experiences ranging from wilderness to developed recreation. There will be construction of fourteen new campgrounds and reconstruction of existing developed sites. This total construction/reconstruction will supply an additional 5,764 PAOTS. In addition to the developed recreation construction, construction/reconstruction of

24.6 miles of trails will enhance the dispersed recreation resource. See Table II-31 for period and location of all new recreation construction projects. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to Table II-32 on the acreage distribution of the specific ROS acres.

E Alternative E would offer a variety of recreational experiences ranging from wilderness to developed recreation. There will be construction of four new campgrounds but not until the third and and fourth decade, and some reconstruction of existing developed sites. This alternative does not meet the demand for developed site use. This total construction/reconstruction will supply an additional 1,271 PAOTS. There will be no trail construction/reconstruction in alternative E. See Table II-31 for period and location of all new recreation construction projects. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to Table II-32 on the acreage distribution of the specific ROS acres.

P Alternative P would offer a variety of recreational experiences ranging from wilderness to developed recreation. There will be construction of twelve new campgrounds and reconstruction of existing sites within this alternative. This total construction/reconstruction will supply an additional 5,150 PAOTs. In addition to the developed recreation construction, construction/reconstruction of 40.9 miles of trails will enhance the dispersed recreation resource. See Table II-31 for period and location of all new recreation construction projects. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to Table II-32 on the acreage distribution of the specific ROS acres.

F Alternative F would offer a variety of recreational experiences stressing wilderness and some dispersed recreation. There will be construction of three new campgrounds and reconstruction of some existing sites within this alternative. Construction/reconstruction of 14.2 miles of trails will enhance the dispersed recreation resource. This total construction/reconstruction will supply an additional 440 PAOT's. See Table II-31 for the location and period for all new recreation construction projects. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to Table II-32 on the acreage distribution of the specific ROS acres. This alternative does not meet the demand for developed site use.

G Alternative G would offer a variety of recreational experiences ranging from wilderness to developed recreation. There will be construction of thirteen new campgrounds and reconstruction of existing sites within this alternative. This total construction/reconstruction will supply an additional 6,175 PAOTs.

In addition to the developed recreation construction, construction/reconstruction of 18.0 miles of trails will enhance the dispersed recreation resource. See Table II-31 for the location and the period of all new recreation construction projects. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to Table II-32 on the acreage distribution of the specific ROS acres.

H Alternative H would offer a variety of recreational experiences ranging from wilderness to developed recreation. There will be construction of two new campgrounds and reconstruction of existing sites. This total construction/reconstruction will supply an additional 440 PAOTS. In addition to the developed recreation construction, construction/reconstruction of 24.4 miles of trails will enhance the dispersed recreation resource. See Table II- for the location and period of all new recreation construction projects. The Toiyabe National Forest contains five Recreation Opportunity Spectrum (ROS) settings: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural. Refer to table II-32 on the acreage distribution of the specific ROS acres. This alternative does not meet the demand for developed site use.

PLANNING ISSUE 2 :

HOW SHOULD THE FOREST RESOURCES BE MANAGED FOR TIMBER IN (A) SIERRA DIVISION, (B) PINYON-JUNIPER TYPE, AND (C) LAS VEGAS (MT. CHARLESTON)?

Timber production is a component of management prescriptions on the Sierra's. Within these prescriptions, there is an array of management practices designed to produce different intensities of timber production. The mixture of management prescriptions within any alternative determines the intensity of timber management, the volume of timber to be produced and the amount of reforestation, and the amount of timber stand improvement.

COMPARISON OF ALTERNATIVES IN RESPONDING TO ISSUE TOPIC 2

A Alternative A provides for an annual long term sustained yield capacity of 1.06 million cubic feet (attained at the 20th period). Timber will come mainly from Dog Valley, Walker and Alpine County. Even-age management would be the predominant silvicultural system used, however, uneven-age management would be used on a case by case basis to meet special management objectives. Continued timber harvesting of the Mixed Conifer and Jeffrey Pine working groups will result in a decrease of acres available for old growth habitat. Thinnings would be scheduled by silviculturalists to maintain optimum growing conditions.

B Alternative B provides for an annual long term sustained yield capacity of 2.10 million cubic feet (attained at the 20th period). Timber will come mainly from Dog Valley, Walker, Alpine Co. and the Carson Front. Even-age management would be the predominant silvicultural system used, however, uneven-age management would be used on a case by case basis to meet special management objectives. Increased timber harvesting over the current situation of the Mixed Conifer, Jeffrey pine and Lodgepole pine working groups will result in a corresponding decrease of acres available for old growth habitat. Thinnings would be scheduled by silviculturalists to maintain optimum growing conditions.

C Alternative C provides for an annual long term sustained yield capacity of 1.41 million cubic feet (attained at the 20th period). Timber will come mainly from Walker and the Carson Front. Even-age management would be the predominant silvicultural system used, however, uneven-age management would be used on a case by case basis to meet special management objectives. Decreased timber harvesting over the current situation of the Mixed Conifer, Jeffrey pine and lodgepole pine working groups will result in a corresponding increase of acres available for old growth habitat. Thinnings would be scheduled by silviculturalists to maintain optimum growing conditions.

D Alternative D provides for an annual long term sustained yield capacity of 1.83 cubic feet (attained at the 20th period). Timber will come mainly from Dog Valley, Alpine Co. and the Carson Front. Even-age management would be the predominant silvicultural system used, however, uneven-age management would be used on a case by case basis to meet special management objectives. Increased timber harvesting over the current situation of the Mixed Conifer and Jeffrey pine will result in a corresponding decrease of acres available for old growth habitat. Thinnings would be scheduled by silviculturalists to maintain optimum growing conditions.

E Alternative E provides for no timber harvesting. No timber harvesting in any of the working groups will result in an increase of acres available for old growth.

P Alternative P provides for an annual long term sustained yield capacity of 1.54 million cubic feet (attained at the 20th period). Timber will come mainly from Dog Valley, Walker, Alpine Co. and the Carson Front. Even-age management would be the predominant silvicultural system used, however, uneven-age management would be used on a case by case basis to meet special management objectives. Decreased timber harvesting over the current situation of the Mixed Conifer and Jeffrey Pine working groups will result in a corresponding decrease of acres available for old growth habitat. Thinnings would be scheduled by silviculturalists to maintain optimum growing conditions.

F Alternative F provides for no timber harvesting. No timber harvesting in any of the working groups will result in an increase of acres available for old growth habitat.

G Alternative G provides for an annual long term sustained yield capacity of 1.50 million cubic feet (attained at the 20th period). Timber will come mainly from Dog Valley and Alpine Co. Even-age management would be the predominant silvicultural system used, however, uneven-age management would be used on a case by case basis to meet special management objectives. Increased timber harvesting over the current situation of all working groups will result in a corresponding decrease of acres available for old growth habitat. Thinnings would be scheduled by silviculturalists to maintain optimum growing conditions.

H Alternative H provides for no timber harvesting. No timber harvesting in any of the working groups will result in an increase of acres available for old growth habitat.

PLANNING ISSUE 3 :

(A) HOW SHOULD THE FOREST BE MANAGED AND/OR USES ADJUSTED TO MAINTAIN THE FLOW OF HIGH QUALITY WATER?

(B) HOW SHOULD AQUATIC AND RIPARIAN HABITATS BE MANAGED SO THEIR QUALITY IS MAINTAINED OR IMPROVED?

(C) HOW SHOULD THE FOREST BE MANAGED AND/OR USES ADJUSTED TO MAINTAIN SOIL PRODUCTIVITY?

COMPARISON OF ALTERNATIVES IN RESPONDING TO ISSUE TOPIC 3

Within all alternatives, riparian areas including floodplains and wetlands would be protected by avoiding or mitigating adverse impacts. All management programs would be designed to avoid direct and indirect support of floodplain development and construction in wetlands to the extent practicable. The non-degradation of water quality and soil productivity are minimum management requirements and occur in all the alternatives.

The following are differences that will occur on riparian areas with regards to range uses and wildlife needs.

A Increased grazing use of the riparian areas will occur in this alternative. Livestock and wildlife range use conflicts will increase.

B Slight increased grazing use of the riparian areas will occur in this alternative. Livestock and wildlife range use conflicts will decrease . This will result from range management aimed at bringing 10% more into satisfactory condition (57,465 acres) over the minimum management situation (approximately 25% of these acres will be in riparian areas)

	and an increase in direct wildlife habitat improvement acres over the current situation that would improve riparian area conditions.
C	Decreased grazing use of the riparian areas will occur in this alternative. Livestock and wildlife range use conflicts will decrease. This will result from range management aimed at bringing 5% more into satisfactory condition (28,180 acres) over the minimum management situation (approximately 25% of these acres will be in riparian areas) and an increase in direct wildlife habitat improvement acres over the current situation that would improve riparian area conditions.
D	The same grazing use as current of the riparian areas will occur in this alternative. Livestock and wildlife range use conflicts will decrease. This will result from range management aimed at bringing 5% more into satisfactory condition (28,180 acres) over the minimum management situation (approximately 25% of these acres will be in riparian areas) and an increase in direct wildlife habitat improvement acres over the current situation that would improve riparian area conditions.
E	Decreased grazing of the riparian areas will occur in this alternative. Livestock and wildlife range use conflicts will decrease. This will result from range management aimed at bringing 5% more into satisfactory condition (28,180 acres) over the minimum management situation (approximately 25% of these acres will be in riparian areas) and an increase in direct wildlife habitat improvement acres over the current situation that would improve riparian area conditions.
P	There will be a slight decreased grazing use of the riparian areas in this alternative. Livestock and wildlife range use conflicts will decrease. This will result from range management aimed at bringing 10% more into satisfactory condition (57,465 acres) over the minimum management situation (approximately 25% of these acres will be in riparian areas) and an increase in direct wildlife habitat improvement acres over the current sistuation that would improve riparian area conditions.
F	Decreased grazing of the riparian areas will occur in this alternative. Livestock and wildlife range use conflicts will remain the same as current. This will result from range management aimed at bringing 5% more into satisfactory condition (28,180 acres) over the minimum management situation (approximately 25% of these acres will be in riparian areas). A decrease in direct wildlife habitat improvement acres over the current situation would cause increased use of the riparian areas by some wildlife species.
G	Increased grazing of the riparian areas will occur in this alternative. Livestock and wildlife range use conflicts will increase slightly. Additional acres that will be brought up to

satisfactory condition by 2030 (approximately 5% over the current situation) will reduce some conflicts, however, increased grazing and a decrease in direct wildlife habitat improvement acres over current will result in an overall increase of conflicts.

H Decreased grazing of the riparian areas will occur in this alternative. Livestock and wildlife range use conflicts will decrease. This will result from range management aimed at bringing 5% more into satisfactory condition (28,180 acres) over the minimum management situation (approximately 25% of these acres will be in riparian areas) and an increase in direct wildlife habitat improvement acres over the current situation that would improve riparian area conditions.

PLANNING ISSUE 4 :

HOW SHOULD RANGELANDS ON THE TOIYABE NATIONAL FOREST BE UTILIZED TO MEET THE NEEDS OF LIVESTOCK, WILDLIFE, WILD FREE-ROAMING HORSES AND BURROS, WATER, AND OTHER RESOURCE USES AND VALUES?

COMPARISON OF ALTERNATIVES IN RESPONDING TO ISSUE TOPIC 4

A Within the fifty year planning horizon of Alternative A, domestic livestock AUM will remain constant at 984,000 AUMs from the first period to the fifth period. Wild free-roaming horse and burro AUMs will decrease from 43,000 AUMs in the first period to 42,250 in the fifth period, for a total of 212,000 AUMs over the fifty year period. Ninty percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 40 percent of the acres, while intensive management would total 60 percent. Because of the range demands of domestic livestock, the riparian areas will come under increased use. Decreased funding of range projects will allow less coordination of uses in riparian areas. The acres of direct wildlife habitat improvement over the current situation would maintain riparian area conditions.

B Within the fifty year planning horizon of Alternative B, domestic livestock AUMs increase from 1,000,000 AUMs in the first period to 1,007,000 AUMs in the fifth period. Wild free-roaming horse and burro AUMs will remain constant from 75,000 AUMs in the first period to 75,000 in the fifth period. Ninety-five percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 30 percent of the acres, while intensive management would total 70 percent. Because of the increase in range demands of domestic livestock, the riparian areas will come under increased use. Increased funding of range projects will allow better coordination of uses in riparian areas. Increased acres of direct wildlife habitat improvement over the current situation would improve riparian area conditions.

C Within the fifty year planning horizon of Alternative C, domestic livestock AUMs decrease from 954,420 AUMs in the first period to 917,080 AUMs in the fifth period. Wild free-roaming horse and burro AUMs will increase from 63,740 AUMs in the first period to 68,000 in the fifth period. Ninety percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 50 percent of the acres, while intensive management would total 50 percent. Because of the decrease in range demands of domestic livestock, the riparian areas will come under decreased use. Increased funding of range projects will allow better coordination of uses in riparian areas. Increased acres of direct wildlife habitat improvement over the current situation would improve riparian area conditions.

D Within the fifty year planning horizon of Alternative D, domestic livestock AUMs increase from 959,000 AUMs in the first period to 1,000,000 AUMs in the fifth period. Wild free-roaming horse and burro AUMs will remain constant from 54,000 AUMs in the first period to the fifth period. Ninety percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 45 percent of the acres, while intensive management would total 55 percent. Increased funding of range projects will allow better coordination of uses in riparian areas. Increased acres of direct wildlife habitat improvement over the current situation would improve riparian area conditions.

E Within the fifty year planning horizon of Alternative E, domestic livestock AUMs increase from 947,320 AUMs in the first period to 949,990 AUMs in the fifth period. Wild free-roaming horse and burro AUMs will decrease from 46,780 AUMs in the first period to 45,690 in the fifth period. Ninety percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 55 percent of the acres, while intensive management would total 45 percent. Because of the decreased grazing by domestic livestock, the riparian areas will come under decreased use. Increased funding of range projects will allow better coordination of uses in riparian areas. Increased acres of direct wildlife habitat improvement over the current situation would improve riparian area conditions.

P Within the fifty year planning horizon of Alternative P, domestic livestock AUMs increase from 980,000 AUMs in the first period to 990,000 AUMs in the fifth period. Wild free-roaming horse and burro AUMs will remain constant at 51,000 AUMs. Ninety-five percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 40 percent of the acres, while intensive management would total 60 percent. Because of the slight decrease in range demands of domestic livestock the riparian areas will come under slightly decreased use.

Increased funding of range projects will allow better coordination of uses in riparian areas. Increased acres of direct wildlife habitat improvement over the current situation would improve riparian area conditions.

F Within the fifty year planning horizon of Alternative F, domestic livestock AUMs will decrease from 940,000 AUM's in the first period to 923,000 AUM's in the fifth period. Wild free-roaming horse and burro AUMs will increase from 52,750 AUMs in the first period to 55,850 in the fifth period. Ninety percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 50 percent of the acres, while intensive management would total 50 percent. Because of the decreased grazing by domestic livestock, the riparian areas will come under decreased use. Increased funding of range projects will allow better coordination of uses in riparian areas. Decreased acres of direct wildlife habitat improvement over the current situation would increase pressure on riparian areas for some wildlife species.

G Within the fifty year planning horizon of Alternative G, domestic livestock AUMs increase from 962,000 AUMs in the first period to 1,040,000 AUMs in the fifth period. Wild free-roaming horse and burro AUMs will remain constant from 50,000 AUM's in the first to the fifth period. Ninety-five percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 30 percent of the acres, while intensive management would total 70 percent.

H Within the fifty year planning horizon of Alternative H, domestic livestock AUMs decrease from 940,000 AUMs in the first period to 925,000 AUMs in the fifth period. Wild free-roaming horse and burro AUMs will will remain constant from 58,000 AUMs in the first period to 58,000 in the fifth period. Ninety percent of the rangelands are expected to be in satisfactory condition by 2030. Extensive management would occur on 45 percent of the acres, while intensive management would total 55 percent. Because of decreased grazing by domestic livestock, the riparian areas will come under decreased use. Increased funding of range projects will allow better coordination of uses in riparian areas. Increased acres of direct wildlife habitat improvement over the current situation would improve riparian area conditions.

PLANNING ISSUE 5 :

HOW SHOULD THE FOREST TRANSPORTATION SYSTEM BE PLANNED, MANAGED AND MAINTAINED SO AS TO PROVIDE ACCESS TO NATIONAL FOREST LANDS AND RESOURCES?

Alternatives E and F contain no road construction supporting the timber management program. Within all other alternatives, road location is dictated by resource management requirements and physical limitations such as topography, environmental factors and economics. None of the alternatives have any road construction within the existing Hoover, Wilderness, the Modelumne WIlderness Addition and the Carson Iceberg Wilderness, as well as areas surrounding the east fork of the Carson, the east and west forks of the Walker rivers and any roadless area recommended as wilderness designation within that alternative. Design criteria used for roads consist of reosurce management objectives, environmental constraints, safety, physical factors, traffic, traffic service levels, vehicle characteristics, users and economics.

PLANNING ISSUE 6 :

(A) TO WHAT EXTENT SHOULD THE FOREST ACQUIRE NEW LANDS INTO THE NATIONAL FOREST SYSTEM AND WHERE?

(B) WHAT UTILITY CORRIDORS, SUBSTATION SITES AND ELECTRONIC SITES ARE NEEDED AND WHERE?

(C) WHAT PUBLIC ACCESSES (RIGHT-OF-WAY) ARE NEEDED AND WHERE?

All alternatives contain a land adjustment directive which permits the adjustment of National Forest system lands to accommodate the goals and objectives of the alternative.

Land adjustments would be used to consolidate federal ownership to increase the efficiency of multiple use management, provide greater public access to National Forest system lands and increase the acreage devoted to key wildlife winter habitat. Land consolidation would permit better management of all resources as the Forest Service has better control over consolidated blocks of land. Land consolidation would also reduce impacts from adjacent landowners.

All alternatives provide for the designation of the following utility corridors:

I-80 (Donner Pass Area)
US 50 East (Bob Scott Summit area)
Sylmar-Los Angeles Transmission Line (East of Mono Lake)

All alternatives provide a window for possible new utilities north and south of Kingsbury (Dagget Pass) from the Meyers-Buckeye line north to the Buckeye-Round Hill line, Luther Pass and Armstrong Pass. Specific project location would be handled through the Environment Analysis process if and when a project is proposed.

Specific projects proposed for construction will be handled through the Environmental Analysis process as will requests for new utility corridors.

See Table III-14 for electronic sites and Table III-15 for public access (right-of-way).

The present National Forest ownership patterns create some limits on resource management.

PLANNING ISSUE 7 :

HOW SHOULD THE FOREST BE UTILIZED TO SATISFY NATIONAL NEEDS FOR MINERALS AND ENERGY RESOURCES WHERE OTHER RESOURCE OPPORTUNITIES WOULD BE FORGONE?

COMPARISON OF ALTERNATIVES IN RESPONDING TO ISSUE TOPIC 7

A Alternative A will provide for 12,210 operating plans. Funding in this alternative is the same as is presently being done for the minerals program and will result in similar management and administration level in the Supervisor's office and at the district level. The level of the mineral program in this alternative will be moderate and designed to develop the mineral resources while protecting the surface resource values. There will be medium response to the 12,210 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

B Alternative B will provide for 13,200 operating plans. Increased funding in this alternative for the minerals program will result in increased management and administration level in the Supervisor's office and at the district level. The level of the minerals program in this alternative will be high and designed to develop the mineral resources to their potential. There will be accelerated response to the 13,200 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

C Alternative C will provide for 10,750 operating plans. Decreased funding in this alternative for the minerals program will result in decreased management and administration level in the Supervisor's office and at the district level. The level of the minerals program in this alternative will be moderate and disigned to develop the mineral resources to their potential. There will be moderate response to the 10,750 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

D Alternative D will provide for 12,180 operating plans. Funding in this alternative is the same as is presently being done for the minerals program and will result in similar management and administration level in the Supervisor's office and at the district level. The level of the mineral program in this alternative will be moderate and designed to develop the mineral resources while protecting the surface resources. There will be moderate response to the 12,180 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

E Alternative E will provide for 11,340 operating plans. A slight reduction in funding in this alternative for the minerals program will result in a slight reduction in management and administration level in the Supervisor's office and at the district level. The level of the mineral program in this alternative will be moderate and designed to develop the mineral resources while protecting surface resource values. There will be moderate response to the 11,340 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

P Alternative P will provide for 12,069 operating plans. Increased funding in this alternative for the minerals program will result in increased management and administration level in the Supervisor's office and at the district level. The level of the minerals program in this alternative will be moderate and designed to develop the mineral resources while protecting the surface resources. There will be accelerated response to the 12,069 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

F Alternative F will provide for 10,290 operating plans. Decreased funding in this alternative for the minerals program will result in decreased management and administration level in the Supervisor's office and at the district level. The level of the mineral program in this alternative will be moderate and designed to develop the mineral resources while protecting surface resource values. There will be a moderate response to the 10,290 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

G Alternative G will provide for 13,300 operating plans. Increased funding in this alternative for the minerals program will result in increased management and administration level in the Supervisor's office and at the district level. The level of the minerals program in this alternative will be medium high and designed to develop the mineral resources to their potential. There will be accelerated response to the 13,300 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

H Alternative H will provide for 10,295 operating plans. Funding in this alternative is the same as is presently being done for the minerals program and will result in the same management and administration level in the Supervisor's office and at the district level. The level of the mineral program in this alternative will be moderate and designed to develop the mineral resources while protecting the surface resources. There will be moderate response to the 10,295 operating plans. Forest-wide standards and guidelines are provided for the management of the oil, gas and mineral resources.

PLANNING ISSUE 8 :

SHOULD THE FOREST RECOMMEND WILDERNESS DESIGNATION FOR ANY OF THE AREAS INVENTORIED UNDER THE REVISED STUDY? IF SO, WHICH ONE(S)?

The alternatives contain a mixture of recommendations for the roadless areas on the Toiyabe National Forest. Table II-34 shows the roadless areas going to recommended wilderness. Figure II-15 shows the various percentages of roadless areas being recommended for wilderness in each alternative.

PLANNING ISSUE 9 :

HOW SHOULD THE TOIYABE NATIONAL FOREST BE MANAGED TO MAINTAIN AND IMPROVE WILDLIFE AND FISH HABITATS?

COMPARISON OF ALTERNATIVES IN RESPONDING TO ISSUE TOPIC 9

A Alternative A provides a mixture of wildlife habitat. The level in this alternative of timber harvesting will favor early successional wildlife species. Wildlife and fisheries user-days would total 7,665,000 for the fifty year planning horizon. Fishing opportunities would total 15,516,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. Alternative A will have 99,000 acres of direct wildlife habitat improvement projects for the fifty year period, with 50 percent in the Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will increase.

B Alternative B provides a mixture of wildlife habitat. Increased timber harvesting will favor early successional wildlife species. Wildlife and fisheries user-days would total 9,530,000 for the fifty year planning horizon. Fishing opportunities would total 19,521,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. This alternative will have 165,000 acres of direct wildlife habitat improvement projects for the fifty year period, with 50 percent in the Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will decrease. The increase in direct wildlife habitat improvement over the current situation would reduce pressure on the existing riparian areas. Range management activities will bring an additional 10% into satisfactory condition (57,465 acres) over the current management situation. These additional acres over the minimum managment requirements would reduce conflicts.

C Alternative C provides a mixture of wildlife habitat. Wildlife and fisheries user-days would total 11,883,000 for the fifty year planning horizon. Fishing opportunities would total 20,346,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. This alternative will have 111,960 acres of direct wildlife habitat improvement projects for the fifty year period, with 50 percent in the Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will decrease. The increase in direct wildlife habitat improvement over the current situation would reduce pressure on the existing riparian areas. Range management activities will bring an additional 5% into satisfactory condition (28,180 acres) over the current management situation. These additional acres over the minimum managment requirements would reduce conflicts.

D Alternative D provides a mixture of wildlife habitat. Increased timber harvesting will favor early successional wildlife species. Wildlife and fisheries user-days would total 11,198,000 for the fifty year planning horizon. Fishing opportunities would total 21,897,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. This alternative will have 144,920 acres of direct wildlife habitat improvement projects for the fifty year period, with 60 percent in the Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will decrease. The increase in direct wildlife habitat improvement over the current situation would reduce pressure on the existing riparian areas. Range management activities will bring an additional 5% into satisfactory condition (28,180 acres) over the current management situation. These additional acres over the minimum managment requirements would reduce conflicts.

E Alternative E provides a mixture of wildlife habitat. No timber harvesting would favor late successional wildlife species. Wildlife and fisheries user-days would total 8,320,000 for the fifty year planning horizon. Fishing opportunities would total 16,234,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. This alternative will have 135,430 acres of direct wildlife habitat improvement projects for the fifty year period, with sixty five percent inthe Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will decrease. The increase in direct wildlife habitat improvement over the current situation would reduce pressure on the existing riparian areas. Range management activities will bring an additional 5% into satisfactory condition (28,180 acres) over the current management situation. These additional acres over the minimum managment requirements would reduce conflicts.

P Alternative P provides a mixture of wildlife habitat. Increased timber harvesting will favor early successional wildlife species. Wildlife and fisheries user-days would total 10,472,000 for the fifty year planning horizon. Fishing opportunities would total 21,096,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. This alternative will have 150,000 acres of direct wildlife habitat improvement projects for the fifty year period, with 65 percent in the Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will decrease. The increase in direct wildlife habitat improvement over the current situation would reduce pressure on the existing riparian areas. Range management activities will bring an additional 10% into satisfactory condition (57,465 acres) over the current management situation. These additional acres over the minimum managment requirements will reduce conflicts.

F Alternative F provides a mixture of wildlife habitat. No timber harvesting will favor late successional wildlife species. Wildlife and fisheries user-days would total 11,432,000 for the fifty year planning horizon. Fishing opportunities would total 19,671,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. This alternative will have 66,460 acres of direct wildlife habitat improvement projects for the fifty year period, with 65 percent in the Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will increase slightly in some localized areas. The decrease in direct wildlife habitat improvement over the current situation would increase pressure on the existing riparian areas in some areas. Range management activities will bring an additional 5% into satisfactory condition (28,180 acres) over the current management situation. These additional acres over the minimum managment requirements will reduce some conflicts.

G Alternative G provides a mixture of wildlife habitat. Increased timber harvesting will favor early successional wildlife species. Wildlife and fisheries user-days would total 8,362,000 for the fifty year planning horizon. Fishing opportunities would total 15,185,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. This alternative will have 34,480 acres of direct wildlife habitat improvement projects for the fifty year period, with 50 percent in the Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will increase. The reduction of direct wildlife habitat improvement over the current situation would increase pressure in localized riparian areas by certain wildlife species. Range management activities will bring an additional 5% into satisfactory condition (28,180 acres) over the current management situation. These additional acres over the minimum management requirments will reduce some conflicts.

H Alternative H provides a mixture of wildlife habitat. No timber harvesting will favor late successional wildlife species. Wildlife and fisheries user-days would total 12,593,000 for the fifty year planning horizon. Fishing opportunities would total 22,849,000 WFUDs over the fifty year planning horizon. Minimum management requirements (MMRs) provide management practices which will maintain viable populations of fish and wildlife species. This alternative will have 158,000 acres of direct wildlife habitat improvement projects for the fifty year period, with fifty percent in the Sierra and the remaining in central Nevada. Conflicts between wildlife and domestic livestock use of riparian areas will decrease. The increase in direct wildlife habitat improvement over the current situation would reduce pressure on the existing riparian areas. Range management activities will bring an additional 5% into satisfactory condition (28,180 acres) over the current management situation. These additional acres over the minimum management requirements will reduce conflicts.

PLANNING ISSUE 10:

HOW SHOULD THE TOIYABE NATIONAL FOREST RESPOND TO THE IMPACTS FROM URBAN ENCROACHMENT INTO THE FOREST ALONG THE RENO-CARSON FRONT, AND GENERAL POPULATION INCREASES IN CENTRAL NEVADA ?

COMPARISON OF ALTERNATIVES IN RESPONDING TO ISSUE TOPIC 10

A This alternative has standards and guidelines to protect all the forest resources. Construction of facilities (both developed and dispersed) in this alternative will occur in the Sierra where the demand will be the greatest. Roadless areas totaling 209.8 M acres (recommended for wilderness designation) will provide for a wilderness experience.

B	This alternative has standards and guidelines to protect all the forest resources. Construction of facilities (both developed and dispersed) in this alternative will occur in the Sierra where the demand will be the greatest. No acres of roadless areas recommended for wilderness designation will occur in this alternative. This alternative will acquire important deer winter habitat along the Reno-Carson Front, lands in Hope Valley and Mt. Charleston. It includes implementation of the Sierra Front Initiative.
C	This alternative has standards and guidelines to protect all the forest resources. Construction of facilities (both developed and dispersed) in this alternative will occur in the Sierra where the demand will be greatest. Roadless areas totaling 1,113.6 M acres (recommended for wilderness designation) will provide for a wilderness experience. This alternative will acquire important deer winter habitat along the Reno-Carson Front, lands in Hope Valley and Mt. Charleston.
D	This alternative has standards and guidelines to protect all the forest resources. Construction of facilities (both developed and dispersed) in this alternative will occur in the Sierra where the demand will be greatest. Roadless areas totaling 592.7 M acres (recommended for wilderness designation) will provide for a wilderness experience. This alternative will acquire important deer winter habitat along the Reno-Carson Front, lands in Hope Valley and Mt. Charleston.
E	This alternative has standards and guidelines to protect all the forest resources. Construction of facilities (both developed and dispersed) in this alternative will occur in the Sierra where the demand will be greatest. Roadless areas totaling 306.1 M acres (recommended for wilderness designation) will provide for a wilderness experience.
P	This alternative has standards and guidelines to protect all the forest resources. Construction of facilities (both developed and dispersed) in this alternative will occur in the Sierra where the demand will be greatest. Roadless areas totaling 211.5 M acres (recommended for wilderness designation) will provide for a wilderness experience. This alternative will acquire important deer winter habitat along the Reno-Carson Front, lands in Hope Valley and Mt. Charleston. It includes the implementation of the Sierra Front Initiative.
F	This alternative has standards and guidelines to protect all the forest resources. Construction of facilities (dispersed recreation trails) in this alternative will occur in the Sierra where the demand will be greatest. Roadless areas totaling 1,992.2 M acres (recommended for wilderness designation) will provide for a wilderness experience.

G This alternative has standards and guidelines to protect all the forest resources. Construction of facilities (both developed and dispersed) in this alternative will occur in the Sierra where the demand will be greatest. Roadless areas totaling 1,348.0 M acres (recommended for wilderness designation) will provide for a wilderness experience. This alternative will acquire important deer winter habitat along the Reno-Carson Front, lands in Hope Valley and Mt. Charleston.

H This alternative has standards and guidelines to protect all the forest resources. Construction and reconstruction of facilities (both developed and dispersed) in this alternative will occur in the Sierra where the demand will be greatest. Roadless areas totaling 1,464.2 M acres (recommended for wilderness designation) will provide for a wilderness experience.

PLANNING ISSUE 11 :

WHAT ADDITIONAL AREAS ON THE TOIYABE NATIONAL FOREST SHOULD BE CLASSIFIED AS RESEARCH NATURAL AREAS?

All alternatives will maintain Research Natural Area status for Mt. Jefferson, Carpenter Canyon and add the Babbitt Peak area to the system. The Sweetwater R.N.A. would be dropped because of the significant alteration to the vegetative cover by mining activity over the last 10-15 years.

APPENDIX C

ROADLESS AREA REEVALUATION
FOR THE TOIYABE NATIONAL FOREST

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INTRODUCTION

The State of California and various environmental organizations claimed in a lawsuit (California vs. Bergland) that the final EIS for the RARE II Evaluation was legally flawed. On January 8, 1980, Judge Karlton of the U.S. District Court ruled that the Rare II final EIS designation of certain roadless areas in California was legally inadequate. The RARE II Final EIS had designated National Forest roadless areas as either: (1) Recommended Wilderness, (2) Further Planning, or (3) Non-Wilderness. Areas designated for Further Planning were to be evaluated further in the Forest planning process. Areas recommended for Wilderness would remain unchanged in Forest planning alternatives. Areas designated as Non-Wilderness would be subject to other land and resource uses.

The United States appealed the decision to the Ninth Circuit Court of Appeals. This Court affirmed the District Court's Decision on October 22, 1982. There were no additional appeals.

On February 1, 1983, John B. Crowell, Jr., Assistant Secretary of Agriculture, announced that roadless areas previously studied for wilderness potential would be subject to reevaluation. This required revisions of the Land and Resource Management Planning Regulations for National Forest System lands. The proposed rule to revise 36 CFR 219.17, Wilderness Designation, appeared in the Federal Register on April 18, 1983, for public review and comment. The final ruling that roadless areas on National Forest System lands would be reevaluated became effective October 7, 1983.

On March 9, 1983, R. Max Peterson, Chief of the Forest Service, issued field direction concerning management of roadless areas subject to reevaluation during the Forest planning process. Part of this direction was to involve public participation activities at the Forest level on roadless area reevaluation.

On July 8, 1983, J. S. Tixier, Regional Forester for the Intermountain Region, issued instructions to the Region IV Forests on methods to be used to initiate public involvement in roadless area reevaluations. The process would begin with the preparation of maps of roadless areas that had been inventoried either in RARE, RARE II, and/or unit plans, along with modifications that had occurred or had been planned since the last evaluation. Each roadless area also would be described as to its environmental, wilderness, and resource attributes. This information would be made available to federal, state, county, and local agencies; elected officials; public and private organizations; and the public, for review and comment during the later half of 1983.

See Appendix A for a description of public involvement conducted in conjunction with the Forest's planning process.

CALIFORNIA WILDERNESS ACT OF 1984

On September 28, 1984, the new California Wilderness Act (CWA) was signed by the President. This legislation applied to the Toiyabe National Forest as follows:

1. Wilderness Classification (CWA)

Carson Iceberg 77,000 acres (approximate) with an additional 78,000 acres on the Stanislaus N.F.

Mokelumne Addition 19,000 acres (approximate) with an additional 36,000 acres on the Stanislaus and Eldorado National Forests.

2. Congressional Study Areas (CWA)

   Carson Iceberg Planning Area 9,700 acres (approximate)
   Hoover Planning Area 49,200 acres (approximate)

3. RARE II Further Planning Areas (Retained for further study by the CWA)

   Hoover Further Planning Area - 54,100 acres
   Sweetwater Further Planning Area - Calif. 40,000 acres
   Nev. 8,700 acres

4. The following RARE II Roadless Areas in California were released to nonwilderness uses for the initial cycle of planning:

17981	Bald Mountain
17440	Horsethief
17982	Dardanelles
17985	Raymond Peak (fringe area)
17513	Cottonwood
17988	Mount Olsen
17986	Carson Iceberg (Mono Co. portion)
17656	Wildhorse
17658	Devils Gate

   Full descriptions of these areas are available in the planning records, in the Supervisor's Office.

This Appendix includes site specific information used in the roadless area reevaluation. Originally, 25 roadless areas were inventoried during the RARE II evaluation in 1978. Prior to RARE II approximately 55 roadless areas had been evaluated in the unit planning/EIS process. Areas designated for non-wilderness were not subject to re-evaluation in RARE II. As a result of the Karlton decision in 1980, and revision of NFMA planning regulations for roadless areas, 72 roadless areas were inventoried. Impacts from resource development and road construction since the 1978 RARE II inventory, and the California Wilderness Act of 1984 has reduced the number for reevaluation to 58 roadless areas.

Two roadless areas are shared with adjacent Forests. Regional direction is that roadless areas will be studied and evaluated in their entirety in one Forest Plan/EIS, if they are located on two or more Forests. The two contiguous roadless areas and lead Forest responsibility for presenting the entire evaluation are as follows:

1. Carson Iceberg Planning Area

Toiyabe	9,700 acres (approx.)
Stanislaus (Lead Forest)	20,300 acres (approx.) 1/
Total	30,000

1/ Only the Tryon Peak portion (3400 acres) is contiguous to the Toiyabe N.F.

2. Excelsior

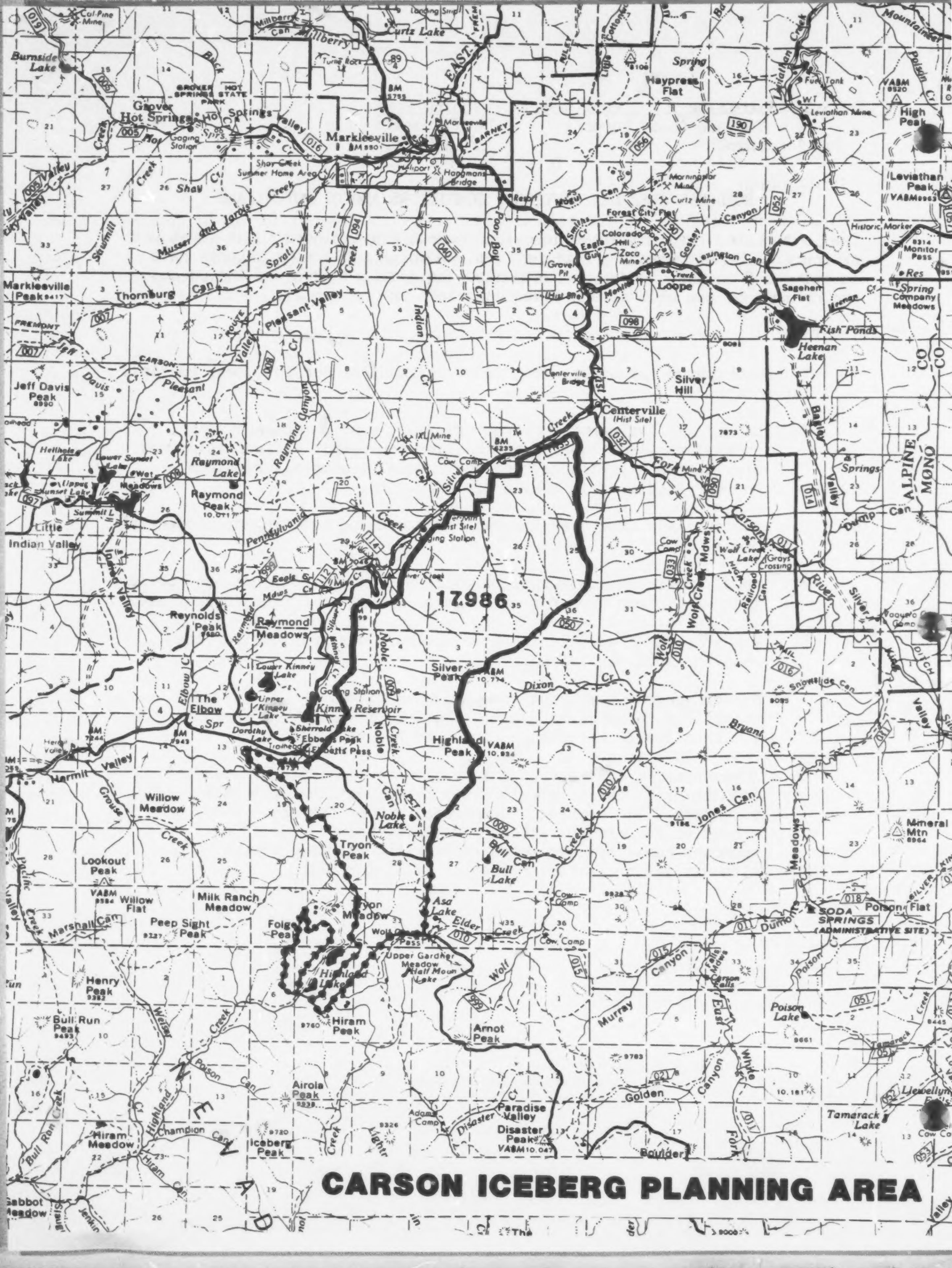
Toiyabe (Lead Forest)		116,290 acres
Inyo		8,300 acres
	Total	124,590

ROADLESS AREA DESCRIPTIONS, CONDITIONS AND/OR POTENTIALS

The inventoried roadless areas described herein are included in at least one of the DEIS Forest Planning Alternatives. When past planning efforts have identified feasible boundary adjustments, the modified area was included in one or more of the DEIS alternatives described in Chapter II.

The following format was used to describe and evaluate each roadless area:

1. Description (location, geography, vegetation, current uses, special attractions).
2. Capability (wilderness characteristics, such as integrity, naturalness, solitude, opportunities for primitive recreation and challenging experiences, and any special features). Possible boundary modifications also are discussed.
3. Availability (the area's known resources and existing and potential uses).
4. Need (proximity to designated wilderness, congressional and public interest in the area for wilderness, and other expressions of need).
5. The effects of wilderness/non-wilderness designations for the roadless area, including:
   - A. Management prescriptions by Alternatives.
   - B. Effects of Alternatives on the area's wilderness character.
   - C. Anticipated effects of the Preferred Alternative.
6. A map showing (1) RARE II inventoried boundaries, (2) boundary adjustments, made to delete areas developed since the RARE II inventory, (3) lands with commercial timber that have been scheduled for harvest within two years, and (4) possible boundary modifications which reflect the emphasis of the alternatives described in Chapter II of the DEIS.



CARSON ICEBERG PLANNING AREA

Roadless Area Name: Carson Iceberg Planning Area

Net Acres: 9680

Description

The Carson Iceberg Planning Area was designated in the California Wilderness Act (CWA) of 1984 with the requirement that the Secretary of Agriculture review the area for its suitability for preservation as wilderness. The report and findings are to be submitted to the President and to the Congress within three years of the CWA (September 28, 1987). This EIS will form the basis for a portion of the report.

The Carson Iceberg Planning Area is approximately 30,000 acres in size with 9,680 acres located on the Toiyabe NF and the remainder on the Stanislaus NF. The Stanislaus has been assigned the lead to evaluate the entire area in their Forest Planning/EIS process. Information presented here will be used in developing their evaluation and ultimately the report required by the CWA.

The Carson Iceberg Planning Area in Alpine County on the Carson Ranger District is seven miles south of Markleeville, California. It encompasses Noble Canyon and the area north to Silver Creek. The area is contiguous to the Carson Iceberg Wilderness on the Toiyabe and Stanislaus National Forest.

The area is accessible from California State Highway 4, between Ebbetts Pass and the junction of Silver Creek with the East Fork of the Carson River. Major geographical features of the area are: Noble Lake, Noble Creek, Silver Peak and Highland Peak at 10,934 feet. The lowest elevation is 6000 feet near Silver Creek.

There is a variety of vegetative types from a few scattered commercial timber stands to barren alpine country. Other vegetative communities are sagebrush-grass meadow, pinyon-juniper and mountain mahogany. The area is within the Sierra Forest Province - lodgepole pine/subalpine forest and alpine meadows and barren ecosystems.

Current uses of the area include primarily livestock grazing and recreation use along the Pacific Crest Trail.

Surroundings include to the south and west the Carson Iceberg Wilderness and the Tryon Peak Planning Area on the Stanislaus National Forest. To the north is Silver Creek and Highway 4 (Ebbetts Pass Highway). On the east is Wolf Creek meadows and the Toiyabe N.F. portion of the Carson Iceberg Wilderness.

Special attractions include Noble Lake, Noble Creek, the Pacific Crest Trail and several high mountain peaks.

Capability

The western, southern and eastern boundaries of the Carson Iceberg Planning Area all follow prominent ridge lines. The northern boundary parallels Highway 4 and skirts around private land.

A possible boundary modification that would enhance manageability of the area would be to pull the northern boundary back to a east-west running ridge would be to pull the northern boundary back to a east-west running ridge containing Silver Peak. This modification would eliminate approximately 4800 acres of moderate to high mineral resource potential, but would include Noble Canyon as wilderness. Directly to the north is the Silver Mountain mining district which has considerable historical mining. The boundary adjustment would also eliminate any conflicts with private land, as the present line is adjacent to private land.

The basic long term ecological processes are intact. Historic prospecting has occurred throughout the area. Remnants are of minor impact and generally blend with the existing environment. Overall, the area has a natural appearance, and man's historic uses blend well with the wilderness setting. Opportunities for solitude are high due in part to the areas size, limited access, and remote drainages. The feeling of solitude can be interrupted along the Pacific Crest Trail. Opportunities for unusual adventure, excitement, challenge, self-reliance, initiative, and judgement are present as there are mountains, streams, cliffs, and much open country with no trails.

Availability

The area presently receives about 2000 RVD's use, which is less than the capacity of the area. The existing trail system provides for adequate access and dispersal through the area. The Carson Iceberg Planning Area has the potential to accommodate additional users and still maintain its wilderness attributes.

The area serves as habitat for deer, bear, coyote, bobcat, cougar, beaver, and a wide variety of smaller animals. Blue grouse, mountain quail, waterfowl, and a variety of smaller birds present. Noble Lake and Noble Creek support a trout population.

The Noble Canyon area is within the East Carson River watershed which is an important source of water for down stream agricultural and communities. Although there are isolated watershed problems, water quality and quantity is good. Most of the soils in this area were developed from granitic parent materials. However, isolated blocks of flow rock material occur. The soils of the mountain slopes are generally shallow over granitics and are typically sandy throughout their profiles with varying amounts of course fragments. Erosion hazard is severe on slopes over 30%. Deeper soils occur in alluvial and colluvial positions. Water holding capacity is generally low.

Livestock grazing is a current use of the area, including the Noble Canyon cattle allotment. The area provides approximately 139 AUM's of grazing. Fences and salting areas are evidence of livestock use.

Air quality meets standards for wilderness classification. Vegetative trends are in a stable condition or on an upward trend.

The Noble Canyon area has been designated by the U.S.G.S. and the Bureau of Mines as having mineral resource potential. Geologic and geochemical tests indicate concentrations of silver, arsenic, lead, and copper in sufficient quantities to warrant further study.

There are limited stands of commercial timber within the unit. No timber sales are scheduled.

The area is rich in cultural resources. Several known historic cabins relating to early logging, mining and ranching are present. Prehistoric sites include base camp and task sites for procuring and processing plant and animal resources. The sensitivity level for the cultural resources varies from low at the higher elevations to high along streams, meadows and lakes.

Several permanent improvements are within the area including livestock control fences, corrals, and trails.

Fire hazard rating for the Noble Canyon Planning Area is low to moderate due to its high elevation and sparse vegetation.

Insect and disease activity is at an endemic stage with little chance of epidemic insect populations in the area.

All of the area is comprised of National Forest system lands.

Need

The nearest major population centers to the Carson Iceberg Planning Area are 70 miles to Reno, Nevada; 130 miles to Stockton, California; 175 miles to Sacramento; and 200 miles to the San Francisco Bay area. Adjacent wilderness areas all within ten miles distance include the Carson Iceberg, Hoover, Emigrant, and Mokelumne.

With passage of the California Wilderness Act of 1984 the Carson Iceberg Wilderness (approximately 78,000 acres on the Toiyabe) was established. In addition, 9680 acres of the Carson Iceberg, Noble Canyon and vicinity, was designated as a planning area. This area is an integral part of the Carson Iceberg and has been historically studied as part of the Carson Iceberg. The wilderness potential has been long recognized through the first roadless area study, in the Alpine Land Use Plan of 1977 and the 1979 RARE II process. During the RARE II process, 64 percent of the public responded in favor of wilderness. Pro-wilderness groups remain strongly in favor of the area as wilderness.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Carson Iceberg Planning Area

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			9.7	9.7		4.9	9.7	9.7	9.7
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		9.7				4.8			
Stewardship Wildlife, Range & Dispersed Rec.					9.7				
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning	9.7								

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Carson Iceberg Planning Area*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	1.4	1.3	1.2	0	0	0
Dispersed Recreation	MRVD	2.2	2.2	2.2	16.3	5.1	14.5	2.2	2.2	2.2
Wildlife	MWFUD	1.0	1.0	1.0	6.4	1.8	5.7	1.0	1.0	1.0
Wildlife Habitat Improvement	Acres	0	0	0	240	208	214	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

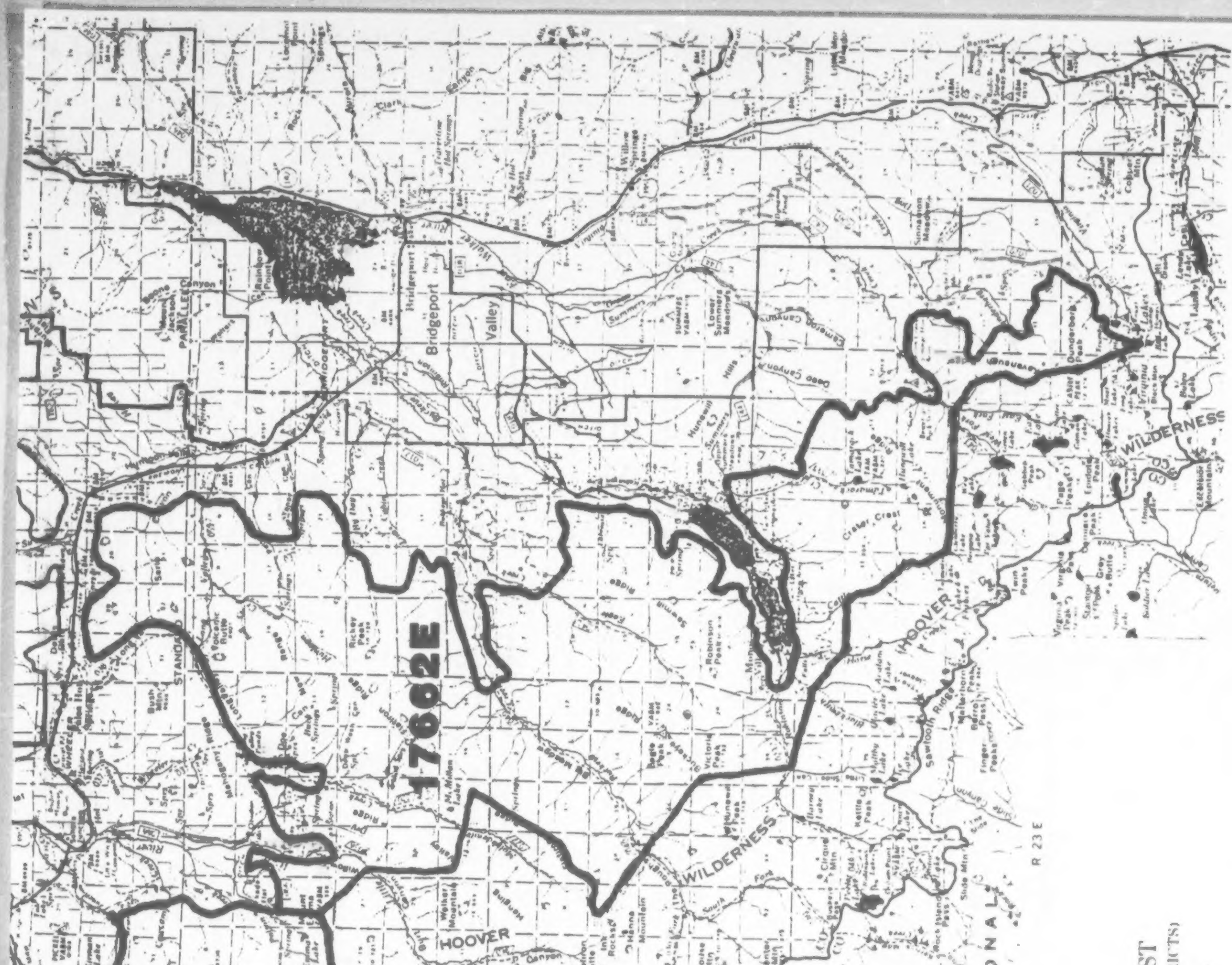
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Carson Iceberg Planning Area

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	E.P.	0	9.7	9.7	0	4.9	9.7	9.7	9.7
Integrity/ Naturalness (Int./Nat.)	No change Int./Nat. will remain high	Same as Alt. A	---------->						
Solitude	No change oppor. for solitude will remain high	Same as Alt. A	---------->						
Primitive Recreation	No change Oppor. for prim. rec. will remain high	Same as Alt. A	---------->						
Challenging Experience	High oppor.	Same as Alt. A	---------->						
Special Features	Pacific Crest Trail	Same as Alt. A	---------->						

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

The Noble Canyon portion of the Carson Iceberg Planning Area (4880 acres), or approximately half of the total area, is recommended for wilderness in the preferred alternative. The remaining 4800 acres are prescribed for intensive wildlife and dispersed semi-primitive recreation activities. The area is expected to be available for wilderness consideration during the next plan revision; however, mineral potential is moderate and development could impact wilderness characteristics on some of the area.



17662W HOOVER PLANNING AREA

17662E HOOVER FURTHER PLANNING AREA

Roadless Area Name:	Net Acres:
Hoover Planning Area, 17662W	49272
Hoover Further Planning Area, 17662E	54132

Description

As a result of the California Wilderness Act of 1984 the original Hoover Extension roadless area (RARE II) has been split into two areas: The Hoover Planning Area (West Walker portion), and the Hoover Further Planning Area (East Walker portion). A report on wilderness recommendation is due to congress within three years for the Hoover Planning Area. For purposes of this analysis the two areas will be studied as one.

The area is on the Bridgeport Ranger District, about six miles west of Bridgeport California. It is entirely within Mono County, and adjacent to the Emigrant Wilderness. The area surrounding this roadless area includes Yosemite National Park, the Emigrant Wilderness, and Cherry Creek roadless area to the west. To the north is California Highway 108 and U.S. 395. To the east is the Bridgeport Valley.

The area has a very large perimeter and is accessible by many travel routes along the north and eastern boundary. Highway 108 is the primary access on the north. A constructed gravel road in the Little Walker drainage also provides access to the north boundary. Roads leading to the area along the east boundary include the Buckeye road, Robinson Creek County road, Green Creek road, and the Virginia Lakes County road. Numerous trails provide access within the area. The entire west side is only accessible by trail.

The area includes the headwaters of the West Walker River and a portion of the East Walker River. The West Walker River drainage is a large "U" shaped glaciated basin rimmed by many high peaks and numerous lakes. East Walker is less spectacular but still offers a diverse scenic landscape. Elevation varies from about 7,400 to 11,800 feet.

The area is within the Sierran Province-lodgepole pine subalpine forest and alpine meadows and barren ecosystems. Due to the elevational range, a diverse vegetative communities exist, some of the more common species being meadow grasses, lodgepole pine, mixed conifer, and sagebrush-grass. Jeffrey pine stands occur at lower elevations around the fringes of the area.

Recreation use is about 200,000 RVDs per year. Helicopter skiing is currently permitted in portions of the East Walker area. The Soil Conservation Service has a snow course at Center Mountain within the Hoover wilderness. In 1978 a new course was located at Leavitt Lake. The intent is to correlate the two areas and eventually remove the Center Mountain course to reduce conflict with potential wilderness designation.

Special attractions include the emigrant route of the Duckwell party, many high mountain lakes, the headwaters of the West Walker River, Robinson Creek and Green Creek.

Capability

The upper West Walker basin portion of the area is surrounded by high peaks and sharp ridges, providing manageable and identifiable boundaries. The northern boundary of the West Walker area follows roads and property boundaries and would be manageable. The northeastern boundary of the West Walker and most of the boundary of the East Walker portion crosses drainages and would be difficult to identify on the ground and would not provide readily manageable boundaries. Presently there is some off-highway vehicle and snowmobile encroachment in the Dunderburg Peak and Green Creek areas. The only alternative would be to move the boundary up higher but it still would cross drainages. There are no sharp terrain features to provide a more suitable boundary.

The long term ecological process is intact. There have been some historic modifications caused by logging, mining, and ranching activities. These are now subordinant to the current natural processes.

The scenic values are spectacular. This area represents the northern extension of the Sierra Crest escarpment. The natural beauty dominates over any minor modifications by man.

Most of the area provides high opportunities for solitude through good topographic relief and vegetative screening. Some exceptions are from Robinson Creek south to Virginia Lakes and near popular lakes within the area.

A wide variety of recreational opportunities are present. This includes day hiking, back packing, camping, fishing, hunting, mountain climbing, ski touring, horse riding and photography. There are numerous trails that provide easy movement throughout the area. Also there are extensive opportunities for cross country hiking. Many lakes and streams are present that enhance the recreational experience.

A full range of opportunities exist for a challenging wilderness experience, for all levels of users. For the beginner, there are readily accessible areas capable of instilling a feeling of remoteness, challenge and adventure. For the veteran wilderness user there are many remote areas, especially when combined with adjacent wilderness areas, that can provide a feeling of challenge, self-reliance and judgement.

Special features include historical cabins relating to early mining and ranching activities. There are no known threatened or endangered wildlife species.

Availability

Present use is about 200,000 RVDs. This use includes a wide variety of primitive recreational activities as described previously. Overall the area is not at its maximum capacity. However, some popular areas are exceeding acceptable use levels. There are three potential ski areas inventoried in the east side of the area; (1) Eagle Peak, (2) Monument Ridge, and (3) Dunderberg. Although development has not been economically feasible, the potential for development is still good, particularly at Dunderberg.

There is a good diversity of wildlife habitat. The California Fish and Game Department supports wilderness classification to protect the existing habitat. The species that are common to the area include deer, bear, cougar, and coyote. Several trout species are found in the numerous lakes and streams.

The mean annual precipitation is 30 to 40 inches. Soils developed from volcanic flow rock parent materials and also from granitic materials. The volcanic soils vary from shallow to moderately deep and have loamy surface horizons and clayey subsoils. Erosion hazard is slight to moderate. Water holding capacity is low to moderate. Soils of the granitics are sandy throughout their profiles. The area is an important watershed within the Walker River system and produces excellent water quality and quantity. Watershed conditions are generally considered good.

The area is grazed by both cattle and sheep. Cattle utilize the area for 3,694 AUMs, and sheep for 1,370 AUMs.

Much of the area is in a climax stage of vegetation. Vegetative trends are stable. The area meets air quality standards for wilderness.

There is limited commercial timber growing in the area, no estimate of annual potential yield has been calculated. Yield would probably be minimal, and no timber sales are scheduled within the area.

According to preliminary review by the USGS, a potential mineral resource area is located along the northern zone of the Hoover Wilderness and lies mostly in the Hoover roadless area . The mineral resource is not exposed at the surface and more detailed geologic studies and subsurface exploration would be required to define the extent and value of this mineral resource. The USGS report is not completed and is further supplemented by information provided by the Forest Service zone geologist. This information indicates the eastern part of the roadless area has moderate potential for economic mineral utilization. There is no known oil and gas or geothermal resources.

Cultural resources include prehistoric and ethnographic Northern Paiute and Miwok use. Also, there are some cabins and remnants of early mining and ranching activity.

Improvements in the area include primitive roads in Kennedy Canyon, Molybdinite, Stockade, Dunderburg, and Rocky Peak areas. Range and administrative fences are in the area as well as four cabins.

Fire hazard is low in the West Walker portion and moderate to high in the East Walker portion. There are no fuel reduction or modification projects planned.

There is an endemic population of insects and some occurrence of disease. No control projects are planned. The potential exists for epidemic populations of insects due to the presence of old growth timber.

There are 530 acres of private land within the area. These presently have no adverse affect on the current management.

Need

This area is adjacent to the Imigrant and Hoover Wilderness areas and Yosemite National Park. Yosemite Park and Emigrant Wilderness both require permits as use is considered at capacity for these areas. It is located about 250 miles east of the San Francisco Bay area and 350 miles north of Los Angeles.

During RARE II, 83% of the public response favored wilderness. Preservation

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groups strongly favor wilderness classification for all or part of the area. The RARE II process resulted in recommendations of wilderness for the majority of the West Walker portion, and further planning for the East Walker portion. The Mono County Board of Supervisors has gone on record opposing additional acres of wilderness in Mono County. However, the board has not objected to inclusion of the West Walker portion in proposed legislation. The Board also wants to maintain options for development of down hil ski areas in the area directly west of Bridgeport from buckeye Creek south to Virginia Creek. The Lahontan Regional Water Quality Board supports wilderness designation in order to protect the water quality of the area.

The California Wilderness Act of 1984 identified the western half of the area as a Congressional Wilderness Study Area requiring the Forest Service prepare and submit a recommendation to the Congress within three years of the date of the Act. The Hoover Further Planning Area was also placed in Further Planning status, but no special reporting was required. The Congressional intent for this area was for wilderness to be evaluated in the normal Land Management Planning process. Because of the above, the Hoover roadless area will be presented in two areas for evaluating the effects of wilderness/nonwilderness prescriptions.

The ecosystems represented in the Hoover roadless area are common throughout the Sierras, and is probably not needed to represent a specific ecosystem type within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Hoover Planning Area (West)

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			49.2	49.2	49.2	49.2	49.2	49.2	4.3
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		49.2							44.9
Stewardship Wildlife, Range & Dispersed Rec.									
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning	49.2								

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Hoover Planning Area (West)*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	5	0	0	0	0
Dispersed Recreation	MRVD	102.7	205.5	102.7	102.7	116.3	102.7	102.7	102.7	196.9
Wildlife	MWFUD	30.8	74.8	30.8	30.8	37.7	30.8	30.8	30.8	71.1
Wildlife Habitat Improvement	Acres	0	5	0	0	0	0	0	0	5
Fuel Management	Acres	0	0	0	0	22	0	0	0	0
Mineral Potential	H/M/L	Low	Low	Low	Low	Low	Low	Low	Low	Low

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Hoover Planning Area (West)

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	E.P.	0	49.2	49.2	49.2	49.2	49.2	49.2	6.3
Integrity/ Naturalness (Int./Nat.)	No change Int./Nat will remain high	Wildlife hab. impr. projects Int./Nat. moderate/ high	Same as Alternative A ---->						Same as Alt. B
Solitude	Oppor. for solitude will remain high	Same as Alt. A	---->						
Primitive Recreation	Oppor. for primitive recreation remains high	Same as Alt. A	---->						
Challenging Experience	High opportunity	Same as Alt. A	---->						
Special Features	Numerous high mountain lakes	Same as Alt. A	---->						

The West-Walker-Leavitt Lake portion (49,200 acres) is recommended for wilderness in the preferred alternative. This recommendation will greatly enhance the existing Hoover Wilderness, Emigrant Basin Wilderness, and the Proposed wilderness in Yosemite National Park. This area has been managed for primitive and semi-primitive non-motorized use for years, and wilderness classifcation would essentially formalize existing management. There are no significant other resource values foregone with wilderness classfication.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Hoover Further Planning Area (East)

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			54.1				54.1	54.1	
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		54.1		52.4		54.1			54.1
Stewardship Wildlife, Range & Dispersed Rec.					49.4				
Market Opportunities (Timber and/or Grazing)				1.8	4.7				
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning	54.1								

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Hoover Further Planning Area (East)*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	14	1	0	1	2	3	0	0	0
Dispersed Recreation	MRVD	162.4	162.3	54.1	162.4	162.4	162.4	54.1	54.1	60.3
Wildlife	MWFUD	63.4	63.4	19.5	63.4	63.4	63.4	19.5	19.5	63.4
Wildlife Habitat Improvement	Acres	2415	2415	0	0	0	0	0	0	0
Fuel Management	Acres	0	0	63	2	5	9	63	63	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

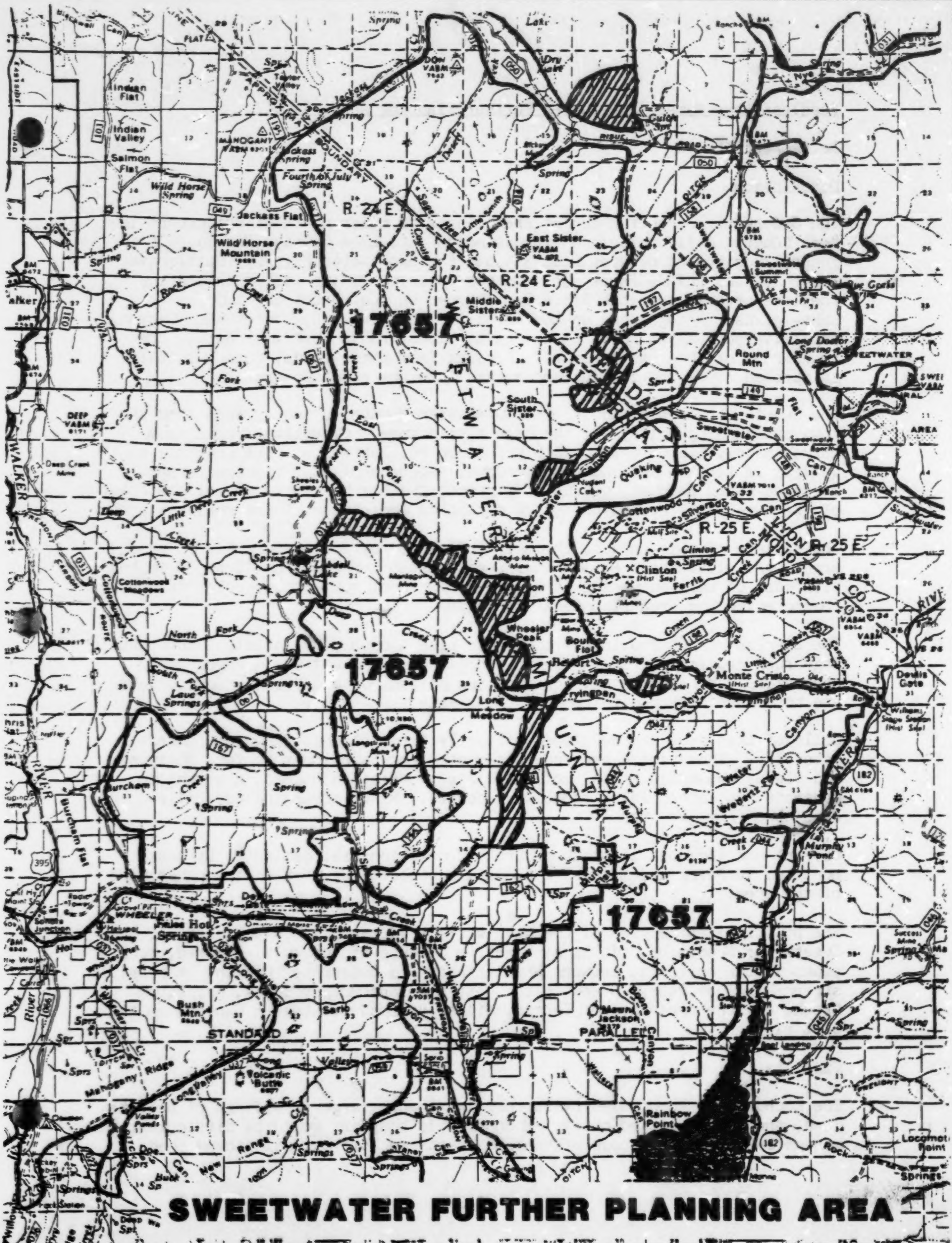
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Hoover Further Planning Area (East)

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	F.P.	0	56.1	0	0	0	56.1	56.1	0
Integrity/ Naturalness (Int./Nat.)	No change Int./Nat. will remain high	Wildlife hab. impr. Int./Nat. moderate/ high	Same as Alt. A --->						
Solitude	No change oppor. for solitude will remain mod./high	Same as Alt. A --->							
Primitive Recreation	No change Oppor. for prim. rec. will remain high	Same as Alt. A --->							
Challenging Experience	High opportunity	Same as Alt. A --->							
Special Features	Numerous 10,000 + peaks and lakes	Same as Alt. A --->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

The Hoover East is prescribed for nonintensive management or semi-primitive recreation. No timber harvest is scheduled during the first planning period. Some fuelwood cutting is prescribed. The area is expected to be available for wilderness consideration during the next revision; however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the areas. There are three potential ski areas in the Hoover East, although none are expected to be constructed during the first decade.



SWEETWATER FURTHER PLANNING AREA

Roadless Area Name: Sweetwater Further Planning Area, #17657

Net Acres: 68112

Description

The Sweetwater Further Planning Area lies five miles north of Bridgeport in Mono County, California, and extends north into Lyon County, Nevada. It is generally situated between U.S. 395 and the Sweetwater Highway (California Route 182 and Nevada Route 338). Other roads providing access around the roadless area include the Risue Canyon road on the north; the Lobdell Lake-Jackass Springs road on the west; and the Star City, Sweetwater Canyon, and Silverado Canyon roads on the east. These roads generally define the boundaries of the roadless area. Feeding from these roads, numerous other unimproved roads provide further access into the roadless area.

The Sweetwater area straddles the Sweetwater Mountains and extends from the low, surrounding valleys to the high alpine zone. Elevations range from approximately 6,000 feet to 11,679 feet on Mt. Patterson. The area has a variety of terrain and includes meadows, sagebrush flats, timbered areas, isolated aspen patches, perennial streams, and the barren ridges of the crest of the Sweetwater Mountains, which dominates the center of the roadless area.

The climate of this area is strongly influenced by the eastern Sierra rain shadow and elevation. Mean annual precipitation ranges from 10 to 30 inches with most of this occurring as winter snow. Cool summers and cold winters characterize the area's temperature regime.

The Sierran Forest Province - lodgepole pine - subalpine forest, Intermountain Sagebrush Province - Pinyon/Juniper Woodland, and Great Basin Sagebrush ecosystems are represented. Steptanthus oliganthus and Draba gradricostata are both sensitive plants found in this area.

Soils of this area are developed primarily from volcanic flow rock parent materials. These soils are moderately deep and have loamy surface horizons and clayey sub-soils. Many soils are stony. Erosion hazard is slight to moderate and waterholding capacity moderate. Minor areas include soils developed from granites.

Current use includes light to moderate recreation use, dominated by deer hunting. Grazing and mineral exploration account for most of the other uses of the area.

The principal attraction of the Sweetwater roadless area is the crest of the Sweetwater Mountains. It is distinctive because of the multi-colored, rocky peaks in the core area between Wheeler Peak and Sweetwater Canyon. Perennial streams include Desert Creek on the west side and Murphy Creek, Fryingpan Creek, and the drainages of Ferris, Silverado, and Sweetwater Canyons on the east side.

Capacity

The boundary is identified by surrounding roads, large inholdings of private land, and the Forest boundary. Much of this boundary would be difficult to manage because of the ease of vehicle access on numerous unimproved roads.

Several constructed roads enter or cross the area; these were within the original roadless review area and remained as unmapped during RARE II.

These roads include those which bisect the roadless area from Fryingpan Creek to Mack Canyon, and from Fryingpan Creek through the Montague Mine to Lobdell Lake. Mineral exploration roads (mostly from the 1950's and 1960's) east of Mt. Patterson and in Ferris and Sweetwater Canyons were also previously unmapped. Other mineral exploration roads, constructed or upgraded during the early 1970's through 1980, access the head of Ferris Canyon and drilling areas near Mt. Patterson. It should be noted that the area of most intensive mineral exploration coincides with the distinctive core area of the Sweetwater Mountains. At present all of these roads, except the Fryingpan-Mack Canyon road, are closed under the Bridgeport District Vehicle Travel Plan. Roadless area boundary modifications to exclude these roads would in effect divide the present roadless area into two or three roadless areas. A boundary adjustment to exclude the mineral exploration activity and roads around Mt. Patterson would eliminate approximately 4,000 acres (amounting to most of the distinctive core area) from the roadless area.

The natural integrity and natural appearance of the country have been impacted to a moderate extent from the above activities. Because of these impacts and intrusions into the area, opportunity for solitude and primitive, unconfined recreation is only moderate. These opportunities and challenges are higher away from the area of intense use. The quality of the air is generally high. It may be affected in localized areas by dust from nearby roads and mineral exploration activities.

Special features include wildlife, which is abundant by local standards, and several sensitive plant species. The high elevation country of the Sweetwater Roadless Area could be considered an unusual if not an extraordinary ecosystem. The area is highly scenic, colorful, and highly visible from all directions. It is rather a unique mountain range unattached to the Sierra Nevada.

Availability

Recreation use consists of motorized and non-motorized dispersed activities, particularly deer hunting.

The area provides good summer and winter range for a sizable deer herd. Wildlife habitat is good and diversity is moderate. Bear and cougar have been reported; deer are numerous and many other smaller animals are present, including sagehen and blue grouse. Fish occur in most of the streams in the area.

The area receives moderate snowfall and is an important watershed for both the East and West Walker Rivers. Watershed conditions are good although there is high natural erosion occurring in Desert Creek and Silverado Canyon.

The roadless area includes parts of several sheep and cattle allotments and has a grazing capacity of 1,050 AUMs for sheep and 2,100 AUMs for cattle. Commercial stands of lodgepole pine occur on the west side of the area, primarily along Desert, Deep, and Cottonwood Creeks. Although no sales are scheduled, the area does produce timber that could be harvested with present-day methods. Commercial pinyon fuelwood cutting areas have been planned on the northern boundary along the Risue Canyon Road.

The Sweetwater area includes the Patterson Mining District and is near the Masonic and Bodie Districts. Historic mining occurred at the Monte Cristo Mine, Star City, the Kentuck Mine, and Silverado Canyon, just outside the roadless area boundary. Mineral patents are present in Swauger Creek, Monte Cristo, Silverado and Sweetwater Canyons. About 2,500 mining claims have been located in or near the roadless area, most lying between Fryingpan and Sweetwater Canyons.

The roadless area has been examined for mineral potential by the U.S. Geological Survey and the U.S. Bureau of Mines. The area from the Sweetwater Crest, east over Silverado Canyon is classified as having high potential for silver in veins and deep porphyry molybdenum deposits. Much of the rest of the roadless area from north of Sweetwater Canyon, and south of Fryingpan Creek to the western boundary has high potential for precious metals as well as base metals such as copper, tungsten, molybdenum and iron. The remaining northern and southern portions of the roadless area have low to moderate potential for precious and base metals. Historic production included gold at Monte Cristo and Star City and silver in Silverado Canyon. Major recent exploration (including road building, trenching, and drilling since the 1960's) has been for molybdenum and silver in the Mt. Patterson area and disseminated gold deposits around Star City and along the roadless area boundary near Fryingpan Creek. There has been minor geothermal exploration on the western boundary of the area, but there have been no lease applications.

Cultural resources are known in the area, and many of these are related to historic mining (prospects, trails, cabins), and prehistoric resource procurement activities. There is evidence for heavy prehistoric occupation.

Private land within the roadless area boundary amounts to 1,080 acres, including mineral patents in Sweetwater Canyon. There are no rights-of-way or special uses.

Fire hazard is moderate to high in the lower country and low in the high country. There are no major insect or disease problems known.

Need

The Sweetwater Further Planning Area is located just north of Bridgeport, California, and is within nine miles of the Hoover Wilderness.

The roadless area was recommended for further planning as a result of RARE II, with final recommendation to be made as to wilderness or non-wilderness under the Forest Plan for the Toiyabe National Forest, scheduled for completion in 1985.

During the RARE II process, 75% of the responding public favored a wilderness designation for this area. The area continues to have strong support for wilderness. Major detractors from wilderness designation here include mining companies and individual miners, who resist the inclusion of present areas of exploration interest and the areas of high mineral potential as wilderness.

With the major exception of the existing developments and the strong likelihood of further mining activity, the area does have a high potential for wilderness. The unusual ecosystem and scenic values of the high elevation areas of the crest of the Sweetwater Mountains, which generally correspond with the area of high mineral potential and mineral exploration, would tend to lend this part of the area to some type of protective designation.

The California Wilderness of 1984 continued the further planning status established by Rare II. Congress did not require any special reports.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Sweetwater Further Planning Area

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			68.1				68.1	68.1	
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		68.1		68.1		68.1			68.1
Stewardship Wildlife, Range & Dispersed Rec.					68.1				
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning	68.1								

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Sweetwater Further Planning Area*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	30	30	0	30	30	30	0	0	30
Dispersed Recreation	MRVD	204.3	204.3	62.0	204.3	62.0	204.3	62.0	62.0	204.3
Wildlife	MWFUD	75.6	75.6	23.1	75.6	23.1	75.6	23.1	23.1	75.6
Wildlife Habitat Improvement	Acres	2430	2430	0	2430	2080	0	0	0	0
Fuel Management	Acres	0	0	50	0	20	0	50	50	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

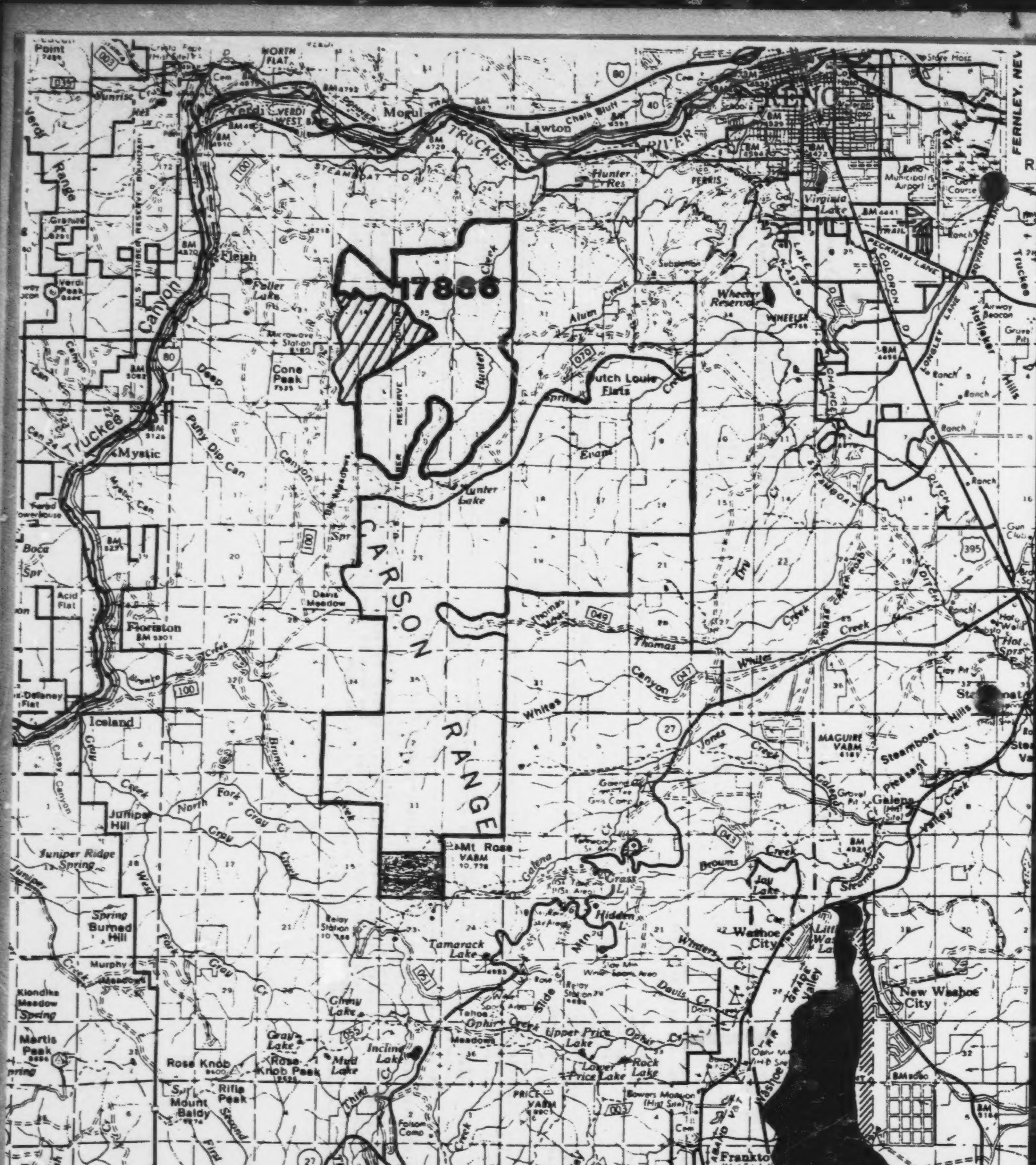
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Sweetwater Further Planning Area

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	E.P.	0	68.1	0	0	0	68.1	68.1	0
Integrity/ Naturalness (Int./Nat.)	Int..Nat will remain low/mod. do to pastg mining activity	Wood prod. wildlife hab. impr. Int./Nat. is low	Same as Alt. A	Same as Alt. B	------------------------------------->		Same as Alt. A	------------------------------------>	
Solitude	No change oppor for solitude will remain moderate	Same as Alternative A	------------------------------------->						
Primitive Recreation	No change oppor. for prim. rec. will remain moderate	Same as Alternative A	------------------------------------->						
Challenging Experience	Limited opportunity	Same as Alternative A	------------------------------------->						
Special Features	Highly colorful mountain peaks	Same as Alternative A	------------------------------------->						

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. About 95 percent of the area is prescribed for nonintensive management or semi-primitive recreation. Timber harvest is scheduled on 171 acres during the first planning period. Some pinyon fuelwood cutting (30 MCF annually) is prescribed. The area is expected to be available for wilderness consideration during the next plan revision; however, a protion of the area has high rating and unscheduled mineral development could impact wilderness characteristics on some of the area.



HUNTER CREEK

Roadless Area Name: Hunter Creek #17866

Net Acres: 5300

Description

The Hunter Creek roadless area on the Carson Ranger District is located within the Carson Range four miles southwest of Reno. The area is accessible from I-80 by the Carson road near Boomtown, which extends to the Hunter Lake area. This is an unmaintained road. Another road provides 4-wheel drive access from southwest Reno to Hunter Lake, although neither road is considered public access because of no rights-of-way. There are no improved or maintained trails providing access to or within the roadless area.

Elevation ranges from 5,200 feet to 8,860 feet. The area is bisected by Hunter Creek, a fairly large perennial stream. The topography is moderate with gentle slopes occurring in the northwest and southwest portions of the area.

Much of the area was logged during the late 1800's and presently is forested with second growth trees. Major tree species are Jeffrey pine, lodgepole pine, white fir and aspen. Lower elevations are covered with sage and bitterbrush. The area is within the Sierra Forest province - mixed conifer ecosystem.

Presently there are no unique uses. The uses present are associated with general forest undeveloped areas, such as hunting and hiking. There is an estimated 2,000 RVDs of use annually. Abouth 950 acres has been impacted by roads and past timber harvest, see cross hatched area on map.

The area is surrounded by the Truckee River Canyon on the west and north sides. The south side is mountain land for about nine miles to the Mt. Rose Highway. Reno is located about four miles to the east.

There are no unique attractions within this area.

Capability

Three miles of the approximate 16 miles of boundary follows private land, the remaining 13 miles follows section lines or is at the edge of roads and recent logging. The boundary does not follow terrain features. Any modification to terrain features would reduce the size far below 5,000 acres. If the present area is designated as wilderness it will need about five miles of line survey to identify the boundary.

Present non-conforming uses include off-highway vehicle driving, both 4x4 and dirt bike. These users mainly come from Reno. Each section of land within the area has two to four roads or trails created by this user group. If wilderness classification is made the off-highway vehicle use could be controlled only by aggressive law enforcement action since no natural terrain features are present to preclude their intrusion.

The entire area was logged for the first time to provide railroad ties for the first transcontinental railroad, and lumber for the Virginia City mines. Of the total acres within the proposed area, about 380 acres were National Forest land prior to 1977. Since the majority of the area was private land it was used for logging and livestock grazing from early settlement times until 1977.

Evidence of man's activities are present throughout the area in the form of old horse skid trails, stumps and fire killed trees. Some of these are becoming faint with the passage of time, while other signs are fresh due to ORV and dirt bike activity.

This area is not connected to other roadless areas being considered for wilderness classification. The longest distance between opposite boundaries is four miles. Most of the distance between the opposite boundaries is about 1 1/2 miles. Due to the confined area the opportunities for solitude are limited.

Slopes range from 30% to 60% in steepness and the terrain is moderately disected with rounded ridges. There are no dominate features that create solitude; however, there is vegetative screening in the center of the area. The northern and eastern lower elevations are open. There are numerous ORV intrusions that introduce man's influence into the area, especially on weekends.

Primitive recreation consists of camping, deer and blue grouse hunting, horse riding, and photography. The duration of these uses is limited due to the size of the area. This implies that an individual would spend one or two days in the area before they would start covering the same ground again.

The opportunities for a challenging experience are dictated by the moderate terrain, the limited opportunities for a long duration of stay without going over the same area, and the uniform features of the terrain. A challenging experience in this area would be limited to persons just beginning in wilderness adventure.

There are no known special features in the area.

Availability

Recreation use consists primarily of ORV use, hunting, fishing, horseback riding, hiking, and photography. Off-highway vehicle use predominates.

Game species present in the area are blue grouse and mule deer. The area is an important deer winter range. Some fish are in Hunter Creek. There are a variety of non-game wildlife species such as birds, rabbits, ground squirrels and chipmunks.

This area receives about 25 to 30 inches of precipitation annually, and is an important watershed of the Truckee River.

The area is part of the Mt. Rose Sheep Allotment and receives 146 AUMs use between July 20 and August 20.

Vegetative trends are in the low seral stages. This is due to man's activities and wildfire. Air quality standards for a wilderness may be obtainable at the upper elevations, but they would probably not be obtainable at the lower elevations especially during weather inversions.

There is approximately 7 MMBF of sawtimber growing in the area. An estimated 100,000 board feet could be harvested annually. No timber sales are planned and future logging would be limited to salvage of insect and disease infested trees. The current insect and disease populations are considered to be endemic.

The potential for mineral development is low to moderate. The nearest mining is in the Peavine District to the north. Known mineralization occurs to the north and southeast of the area. No interest in oil and gas potential exists at this time. Geothermal activity may exist at the extreme lower elevations.

Prehistoric values for the area relate to Washoe and Martis occupation. Historical remains from late 1800s logging are evident.

No powerlines or microwave sites are present. There have been no interest for these expressed.

The fire hazard is high, although there have been no fires in the last five years.

These are 160 acres of private land with the remainder of the area having National Forest status.

Need

The area is within four miles of Reno. The nearest existing wilderness area is the Desolation Wilderness that is located about 30 miles to the southwest.

During the RARE II process, public opinion was mixed with about 55 percent of those making comments supporting wilderness. The Toiyabe Chapter of the Sierra Club has expressed recent interest in the area, as wilderness.

The mixed conifer ecosystem is common throughout the Sierra Nevada, and the Hunter Creek roadless area is not a particularly outstanding representative of this ecosystem type.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Hunter Creek

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness			5.3				5.3	5.3	
Minimum Level (Custodial)					5.3				
Intensive Wildlife & Dispersed Rec.		5.3		5.3		5.3			5.3
Stewardship Wildlife, Range & Dispersed Rec.	5.3								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Hunter Creek*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	5	0	5	5	5	0	0	5
Dispersed Recreation	MRVD	4.9	9.9	2.6	9.9	2.4	9.9	2.6	2.6	9.9
Wildlife	MWFUD	.3	1.0	.3	1.0	.2	1.0	.3	.3	1.0
Wildlife Habitat Improvement	Acres	4	4	0	4	1	4	0	0	0
Fuel Management	Acres	0	0	8	0	0	0	8	8	0
Mineral Potential	H/M/L	Low	Low	Low	Low	Low	Low	Low	Low	Low

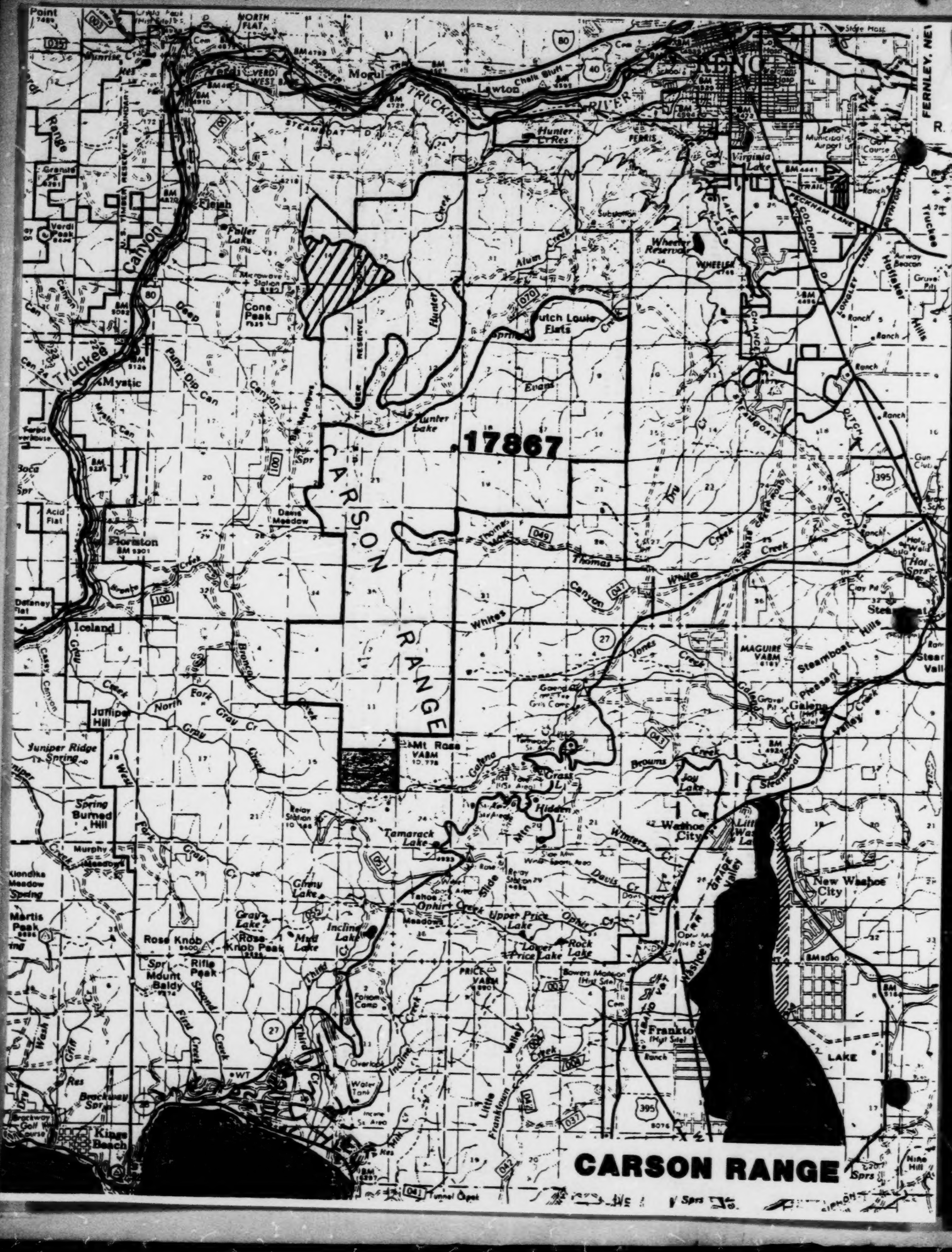
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Hunter Creek

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	5.3	0	0	0	5.3	5.3	0
Integrity/ Naturalness (Int./Nat.)	No change. Int./Nat. will remain low	Same as Alt. A	------------------------------------>						
Solitude	No change. Oppor for solitude is low	Same as Alt. A	ORV restrictions will increase solitude to low/moderate	Same as Alt. A	------------------------>		Same as Alt. C	------------------>	
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alt. A	------------------------------------>						
Challenging Experience	moderate terrian limited opportunity	Same as Alt. A	------------------------------------>						
Special Features	Not represented	Same as Alt. A	------------------------------------>						

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. About 92 percent of the area is prescribed for nonintensive management or semi-primitive recreation. No timber harvest is scheduled during the first planning period. Some wildlife habitat improvement and fuelwood cutting is prescribed. With any new development activities occurring in the Hunter Creek area it is unlikely that it will qualify for wilderness consideration during the next plan revision due to the areas limited size.


17867
CARSON RANGE
CARSON RANGE
Reno
Truckee River
Verdi
Mogul
Lawton
Hunter Lake
Mt Rose VABM 10,776
Galena
Tamarack Lake
Incline Lake
Washoe City
New Washoe City
Washoe Lake
Steamboat Hills
Pleasant Valley
Franktown
Floriston
Mystic
Iceland
Boca
Juniper Hill
Rose Knob
Mount Baldy
Kings Beach
Brockway Spr
Martis Peak
Cone Peak
Peavine Peak
Dutch Louie Flats
Thomas Creek
Whites Canyon
Jones Creek
Galena Creek
Ophir Creek
Upper Price Lake
Lower Price Lake
Rock Lake
Hidden L
Grass L
Joy Lake
Wheeler Reservoir
Virginia Lake
Fernley, Nev

Roadless Area Name: Carson Range, #17867

Net Acres: 14538

Description

The Carson Range roadless area on the Carson Ranger District lies 10 miles southwest of Reno and is principally on the east slope of the Carson Range. Access to the area is by Interstate Highway 80 from the north and east sides. The west side access is from U.S. Highway 395 and the south access is from Nevada State Highway 431, the Mt. Rose Highway. From each of these major roads, access is by dirt roads that stop at the area boundary. Access within the area is by the Mt. Rose and Thomas Creek hiking trails.

Elevations range from about 5,200 feet near Evans Creek to 10,400 feet near Mt. Rose. The area includes the north shoulder of Mt. Rose, a prominent peak seen from Truckee Meadows. Steep canyon headwalls at the headwaters of Whites Creek are within the area. Other less spectacular but scenic country in Evans Creek and along the crest of the Carson Range are included.

The area lies within the Sierran Forest province - lodgepole pine/sub-alpine Forest, and the mixed conifer, ecosystem. The area includes plant communities ranging from the cheat grass - sagebrush foothills to the high mountain alpine type.

Current uses include less than 1,000 RVD's of dispersed recreation, a part of the Mt. Rose Sheep Allotment (total allotment use on National Forest land is 44 AUMs), and deer habitat. The deer habitat is used in all seasons of the year depending on the elevation. A planned use that has developed since RARE II is a ski development in Section 14 of T.17N., R.18E., MDM.

To the east of the area is urban southwest Reno. Southeast is the Mt. Rose Highway. There are restaurants, bars, and ski areas in this travel corridor. Southwest is the north shore of Lake Tahoe. To the west is the Truckee River Canyon with Interstate 80, the railroad and several small towns. To the north is the Hunter Creek Roadless Area, Number 17866.

Special attractions include Mt. Rose, with an elevation of 10,778 feet, and the headwaters of Bronco Creek, and Whites Creek. There are no lakes. Perennial streams include Whites, Thomas, Evans, and Bronco Creeks.

Capability

Because of the irregular, narrow shape of the area, boundaries would need to be established on land lines except for the northwest and north boundaries, which could follow roads. The boundary cannot be expanded beyond its present location due to man-made developments. There are no natural terrain features to follow if the boundary were reduced. A reduction in size to terrain features would eliminate the area as there is only one main ridge in the center of the area.

The natural integrity is generally intact. Man's past use has included livestock grazing, and historic logging. The historic logging was associated with the early development of Reno and the railroads.

The area appears in a natural condition. Man's uses have not changed the general mountain land appearance for the general dispersed recreationist.

The opportunities for solitude vary depending on a persons location. There are places in the head of Brono, Whites, and Thomas Creeks where solitude is obtainable due to topographic relief and vegetative screening. There are places on the east side where activities from the urban Reno area and off-highway vehicle use is the dominate influence.

Primitive recreation opportunities include camping, hunting, fishing, touring, hiking, horse riding, and photography.

The opportunities for challenging experiences would vary depending on wilderness skills of the individual. A person just beginning in wilderness travel could enjoy the adventure and challenge of the Carson Range. It would not offer much challenge to the experienced mountaineer due to the small size and moderate terrain.

The Mt. Rose Peak area was used by Doctor James Church in the first studies done on correlating moisture content in the snowpack with runoff. The area has been identified by the State of Nevada with a roadside marker at the Mt. Rose Summit.

Availability

This area presently provides a backcountry dispersed recreation experience that is within 25 miles of Reno. The type of summer experience is one of day use or short duration, up to 3 days. The winter experience is generally day use by cross-country skiing, mostly on the south fringe. The length of stay is dependent upon the small size of the area. The potential for other types of use is limited due to the area's physical characteristics.

Deer, bear, and a few cougar occupy the area, along with other smaller animals. The area has a substantial blue grouse population and contributes to the blue grouse hunting season experience for the Reno area hunters. Whites Creek, Evans Creek and the upper reaches of Bronco Creek are within the area but provide little, if any fishing opportunity.

The climate of this area is strongly influenced by the eastern Sierra rain shadow and elevation. Mean annual precipitation ranges from 20 to 40 inches with the bulk occurring in winter as snow. Cool summers and cold winters characterize the areas temperature regime. The area is a contributor to the Truckee River water yield. Since all water is important to the Truckee system, the yield from this area is important.

Soils of this area developed from volcanic flow rock parent materials and granitic parent materials. The volcanic soils vary from shallow to moderately deep and have loamy surface horizons and clayey subsoils. Erosion hazard is slight or moderate and water holding capacity is low or moderate. Soils of the granites are sandy throughout their profiles. Erosion hazard is moderate to severe and water holding capacity is low or moderate.

The Mt. Rose Sheep Allotment takes in most of the area. Most of the grazing use is on private land. The National Forest permit is on-off use for 44 AUMs by one sheep band. Most of this occurs in the head of Bronco Creek from July 20 to August 20.

The air quality meets the standards for a Class I area for most of the area. The only part that would be questionable is the lower Evans Creek area. It is affected by lower air quality during inversion weather conditions in the Reno area.

There are commercial timber stands within the unit but no estimated annual harvest has been calculated. No timber sales are scheduled within the 5 year plan.

Mineral potential is considered moderate. Likely mineralization would include gold, silver, mercury, and molybdenum. Oil and gas potential is nil. Geothermal potential may exist along the eastern edge of the area at low elevations. No leases or leases pending exist.

There are numerous historical uses that have occurred. Much of the area was logged during the construction of the first railroad, the mines of the Comstock, and the development of Truckee Meadows. Signs of the old logging operations are still visible, such as stumps and skid trails. Prehistoric use is evident particularly along the lower foothills and higher elevations of the range.

In 1983, the Galena Ski Resort identified National Forest land in Section 14, T.17N., R.18E., as desirable alpine ski terrain. The resort would like to develop part of this section in connection with the adjacent private land. The anticipated construction schedule would call for a Forest Service special use permit to be considered sometime around 1988.

The fire occurrence is low, with no fires in the last 5 years. Fuel loading is high, especially in the overmature lodgepole pine stands southeast of Davis Meadows. The hazard rating is high.

There are no insect or disease problems at this time. The overmature lodgepole pine stands mentioned above do present a high risk.

There are 560 acres of private land within the area with the remainder National Forest System lands. Of this, 240 acres is located in Section 12 of T.17N., R.18E. The rest is scattered in 40's and 80's throughout the area. The private land does not block access.

Need

The Carson Range roadless area is within 10 miles of Reno, and is 28 miles east of the Desolation, the nearest wilderness.

The two ecosystems represented in the area are found throughout the Sierra Nevada and, this area is probably not needed for outstanding representation of the ecosystem types.

During the RARE II process, 58% of the public responding favored wilderness. The Toiyabe Chapter of the Sierra Club has expressed continuing interest in the Carson Range roadless area as wilderness.

Because most of this area has been acquired since 1978, there is not a long record of planning and public involvement on the area. The only Forest Service planning with public involvement was RARE II.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Carson Range

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E	Alt. G	Alt. H
Wilderness			14.5				14.5	14.5	
Minimum Level (Custodial)					14.5				
Intensive Wildlife & Dispersed Rec.		14.5		14.5		14.5			14.5
Stewardship Wildlife, Range & Dispersed Rec.	14.5								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Carson Range*

Management Description		A	B	C	D	E	F	E	G	H
Sawtimber	MBF	0	0	0	304.5	0	86.5	0	0	0
Fuelwood	MCF	18	14	0	14	14	14	0	0	14
Dispersed Recreation	MRVD	15.0	29.1	7.6	29.1	7.0	29.1	7.6	7.6	29.1
Wildlife	MWFUD	.9	3.1	.9	3.1	.6	3.1	.9	.9	3.1
Wildlife Habitat Improvement	Acres	9	11	0	11	3	11	0	0	11
Fuel Management	Acres	0	0	22	0	0	0	22	22	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

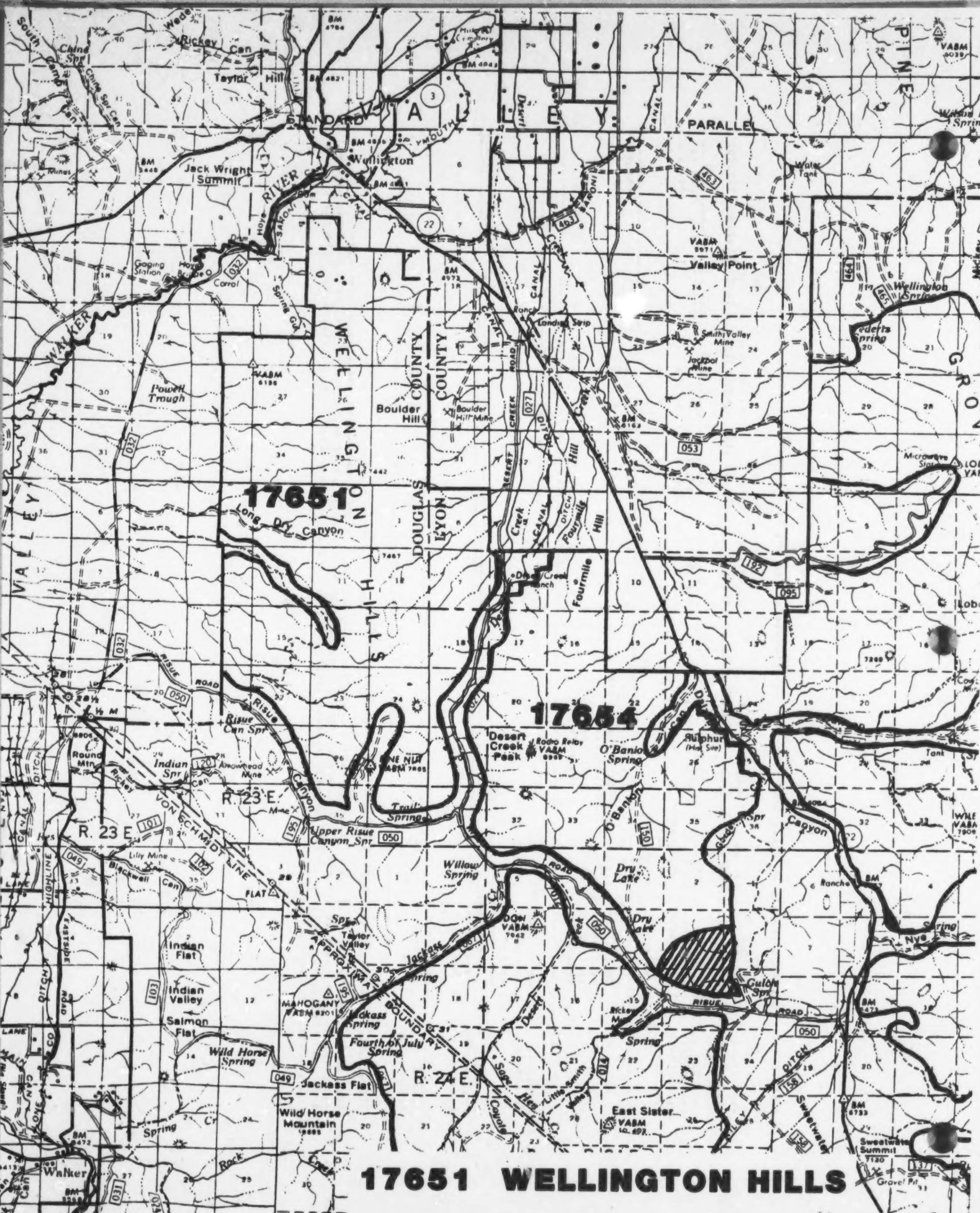
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Carson Range

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	14.5	0	0	0	14.5	14.5	0
Integrity/ Naturalness (Int./Nat.)	No change. Int./Nat. will remain high	Wildlife hab. impr. Int./Nat. moderate/ high	Same as Alt. A	Same as Alt. B	Same as Alt. A	Same as Alt. B	Same as Alt. A	---------->	Same as Alt. B
Solitude	No change. Oppor. for solitude is low/ moderate	Same as Alt. A	ORV re- strictions increases solitude to moderate	Same as Alt. A	----------	---------->	Same as Alt. C	---------->	Same as Alt. A
Primitive Recreation	No change oppor. for solitude will remain low/moderate	Same as Alt. A	----------	----------	----------	----------	----------	----------	---------->
Challenging Experience	Small size, moderate terrain low opportunity	Same as Alt. A	----------	----------	----------	----------	----------	----------	---------->
Special Features	Historical sites	Same as Alt. A	----------	----------	----------	----------	----------	----------	---------->

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. About 77 percent of the area is prescribed for nonintensive management or semi-primitive recreation. Timber harvest is scheduled on 46 acres during the first planning period. Some wildlife habitat improvement and fuelwood cutting is prescribed. The area is expected to be available for wilderness consideration during the next plan revision.



17651 WELLINGTON HILLS

17654 DESERT CREEK PEAK

Roadless Area Names:	Net Acres:
Wellington Hills, #17651	20618
Desert Creek Peak, #17654	11414

Description

The Wellington Hills and Desert Creek Peak roadless areas have been combined for evaluation purposes because of similar character, location, capability and availability. These areas lie east of Coleville, California, and southwest of Yerington, Nevada, in Lyon and Douglas Counties. Access is provided by Nevada Route 338, and the Risue Canyon and Desert Creek roads.

Topography varies from gentle, rolling hills on the west side of Wellington Hills and the southeast side of Desert Creek Peak, to steep rugged terrain around Desert Creek Canyon where it divides the two areas. The climate of the area is strongly influenced by the eastern Sierra rain shadow and elevation. Mean annual precipitation ranges from 5 to 15 inches with the bulk occurring in the winter as snow. Cool summers and cold winters characterize the areas' temperature regime. The predominant vegetation is pinyon-juniper with sagebrush along the outside edges and lower slopes where the roadless areas include portions of the surrounding valleys. The Intermountain sagebrush-pinyon-juniper woodland ecosystem is represented here.

Current use includes woodcutting and deer hunting. About 750 acres have been impacted by woodcutting in the southeast corner, see cross-hatched area on map.

No perennial streams cross the roadless areas but Desert Creek flows between them. The only outstanding geographic feature in the area is Desert Creek Peak. It is the highest point between the Sweetwater Mountains to the south and Smith Valley to the north. Desert Creek Canyon located outside the roadless area contributes to the scenic values of the area.

Capability

The roadless area boundaries are drawn along the Forest boundary and constructed roads in the major drainages of the two areas. Numerous other unimproved roads cross these boundaries, particularly in the north, west, and east sides where the topography is fairly gentle. The Forest boundary and the constructed roads probably provide the most manageable boundary for effective roadless area management without major boundary adjustments to exclude the lower, gentle topographic areas on the north and west sides of Wellington Hills and the southeast side of Desert Creek Peak. These deletions would amount to approximately 6,000 acres in Wellington Hills and 1,500 acres in Desert Creek Peak.

The natural integrity and natural appearance of these areas vary from moderate to high. Portions are relatively untouched with opportunities for unconfined, primitive recreation and solitude. In other portions, numerous roads have resulted from vehicle access for woodcutting or hunting.

The general area enjoys clean, pure air because of the absence of sources of pollution, but this may be impacted to a minor degree by nearby woodcutting areas.

There are no special features in the areas and no known sensitive species are present.

Availability

Recreation use is low with deer hunting in the fall being the primary use. Wildlife is not particularly abundant, but the Wellington Hills contain very important mule deer habitat.

Grazing use includes 310 AUMs for sheep in Wellington Hills and 256 AUMs for sheep in Desert Creek Peak.

There is no commercial sawtimber in the area, however 600 to 700 cords of commercial green pinyon fuelwood have been harvested along the southeast boundary of Desert Creek Peak. At present, about 750 acres within the roadless area boundary have been impacted and there are ongoing plans for further commercial fuelwood sales here. Personal use green pinyon fuelwood cutting has taken place on the western, gentle slope of the Wellington Hills since 1979. Since 1982, this has been restricted to the area around Risue Canyon.

No significant mineral exploration has occurred within these roadless areas. However, reportedly there was past production of gold, copper, and tungsten at the Arrowhead Mine in Risue Canyon and silver at the Blackwell Mine on the east side of the Wellington Hills. Recent exploration in these areas has been for the above minerals plus, auranium and fluorspar. The area is classified as having moderate mineral potential. Geothermal gradient holes were drilled in the northwest corner of Wellington Hills in 1979, but there have been no lease applications or any further interest in geothermal resources.

Cultural resources in the form of lithic scatters and rock rings have been recorded throughout the pinyon-juniper zone and are probably indicative of resource procurement. Several petroglyph sites are present as well.

No rights-of-way or withdrawls are present within these roadless areas. A permanent radio repeater installation exists on the top of Desert Creek Peak. This facility consists of a small concrete block building.

Except for one 40-acre parcel in Desert Creek Peak, all land in these two areas is within the National Forest System.

Fire hazard is rated moderate to high. The high hazard areas are located where fuelwood cutting residues remain. There are no significant insect or disease problems. Bark beetles are periodically reported in the Risue Canyon area.

Need

These roadless areas are located within 10 miles of Coleville, California, and 25 miles of Yerington, Nevada. The nearest classified wildernesses are the Hoover and Emigrant Basin, 25 miles southwest in the Sierra Nevada.

During the RARE II process, the majority of written comments received indicated that the public favored non-wilderness uses of these areas. The heavy use for fuelwood cutting, especially by the people of Walker-Coleville and Smith Valley, suggests that the local preference for non-wilderness classification for these areas has not changed since RARE II.

These roadless areas were not recommended for wilderness or further planning under RARE II. These areas have not been included in any proposed wilderness legislation.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Wellington Hills

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							20.6		
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.			20.6	20.6	20.6	20.6			20.6
Stewardship Wildlife, Range & Dispersed Rec.	20.6								
Market Opportunities (Timber and/or Grazing)		20.6						20.6	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Wellington Hills*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	3	3	3	3	3	3	0	5	3
Dispersed Recreation	MRVD	9.0	2.5	17.9	17.9	17.9	17.9	5.4	4.9	17.9
Wildlife	MWFUD	1.8	.9	6.8	6.8	6.8	6.8	1.8	1.8	6.8
Wildlife Habitat Improvement	Acres	197	0	277	277	277	277	0	0	277
Fuel Management	Acres	14	13	14	14	14	14	26	26	14
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Wellington Hills

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	20.6	0	0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. & wood products Int/ Nat. mod.	Mining & wood products Int./ Nat. remains moderate	Same as Alt. A ---------->				No woodcutting Int./Nat will increase to mod./high	Same as Alt. B	Same as Alt. A
Solitude	No change oppor. for solitude will remain low	Same as Alt. A ---------->					ORV restriction will increase solitude to moderate	Same as Alt. A	Same as Alt. A
Primitive Recreation	No change Oppor. for prim. rec. will remain low/mod.	Same as Alternative A ---------->							
Challenging Experience	Limited opportunities	Same as Alternative A ---------->							
Special Features	Not represented	Same as Alternative A ---------->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

Neither of the areas is recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-premitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed in both areas. Both Wellington Hills and Desert Creek Peak are expected to be available for wilderness consideration during the past plan revision; however, mineral potential is moderate and development could impact wilderness characteristics on some of the area.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Desert Creek Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							11.4		
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		11.4	11.4	11.4	11.4	11.4		11.4	11.4
Stewardship Wildlife, Range & Dispersed Rec.	11.4								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Desert Creek Peak*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	3	2	2	2	2	0	2	2
Dispersed Recreation	MRVD	5.0	18.8	9.9	9.9	9.9	9.9	2.9	9.9	9.9
Wildlife	MWFUD	1.0	7.2	3.7	3.7	3.7	3.7	1.0	3.7	3.7
Wildlife Habitat Improvement	Acres	115	302	165	165	165	165	0	165	165
Fuel Management	Acres	8	15	8	8	8	8	15	8	8
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

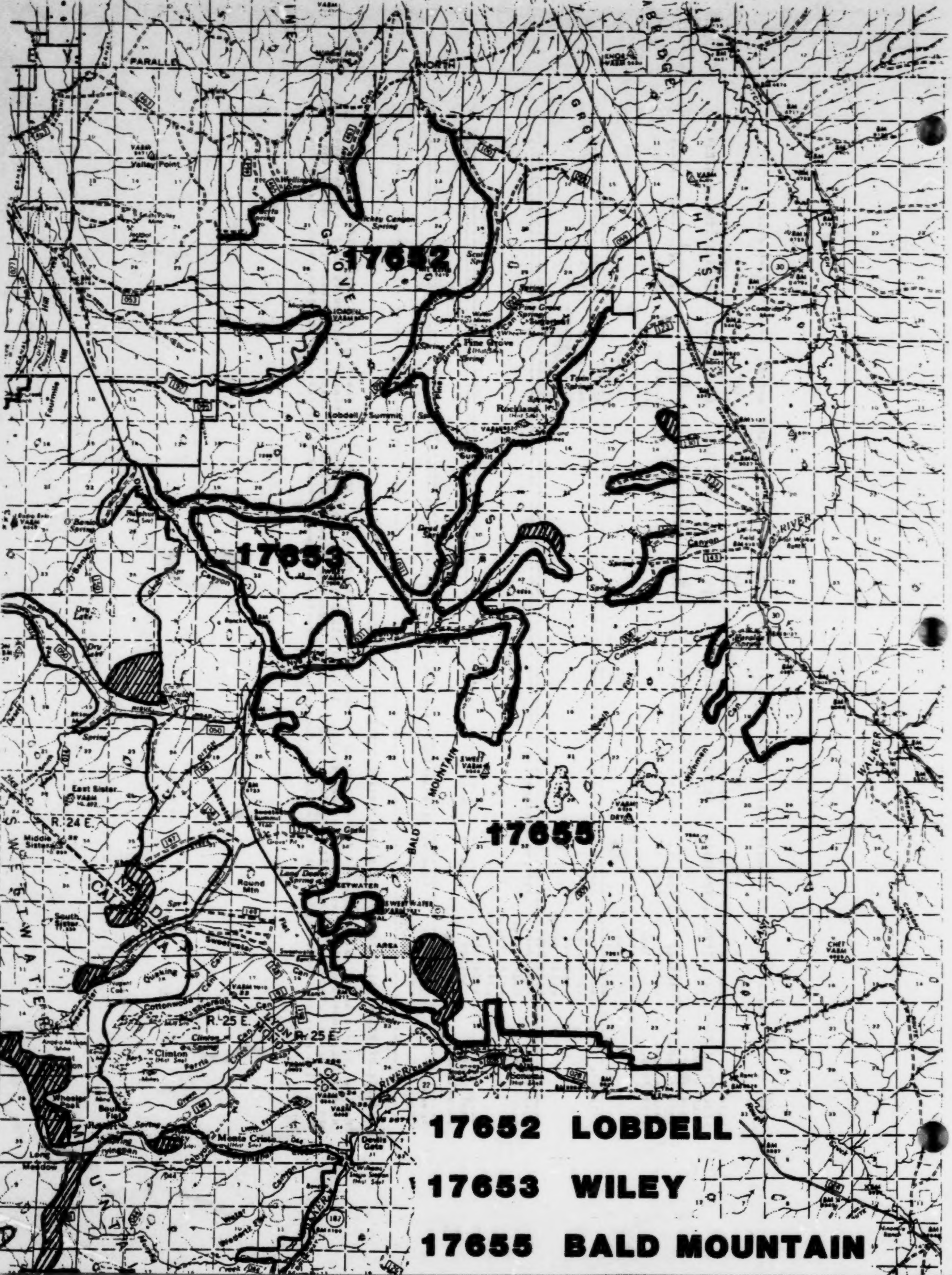
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Desert Creek Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	11.6	0	0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr., wood prod. Int./Nat. mod./high	Same as Alt. A ----->					No wood-cutting reduced mining Int./Nat. high	Same as Alt. A ----->	
Solitude	No change oppor. for solitude will remain moderate	Same as Alt. A ----->					ORV restriction will increase solitude to mod/high	Same as Alt. A ----->	
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A ----->							
Challenging Experience	Limited opportunities	Same as Alternative A ----->							
Special Features	Not represented	Same as Alternative A ----->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

Neither of the areas is recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed in both areas. Both Wellington Hills and Desert Creek Peak are expected to be available for wilderness consideration during the past plan revision; however, mineral potential is moderate and development could impact wilderness characteristics on some of the area.



17652 LOBDELL

17653 WILEY

17655 BALD MOUNTAIN

Roadless Area Names:	Net Acres:
Lobdell, #17652	29071
Wiley, #17653	6285
Bald Mountain, #17655	69279

Description

The Lobdell, Wiley, and Bald Mountain roadless areas have been combined for evaluation purposes because of their similar location, character, capability, and availability. These areas lie south of Yerington, Nevada and within Lyon County, covering most of the Pine Grove Hills-Bald Mountain area. Access is provided by Nevada Route 338, Sweetwater-Hawthorne road, Pine Grove Flat road, and feeder roads off of these into the main drainages of Sand Canyon, Nye Canyon, and Pine Grove Canyon.

The climate is influenced by the eastern Sierra rain shadow and elevation. Mean annual precipitation ranges from 5 to 15 inches with most occurring in the winter as snow. The areas are characterized by pinyon-juniper woodlands and open sagebrush flats. Topography varies from steep, rugged canyons to moderately steep slopes extending down to the surrounding valleys, and large flat areas. The intermountain sagebrush province-pinyon juniper woodland ecosystem is represented here.

Current use includes dispersed recreation, hunting, grazing, fuelwood cutting, and mineral exploration.

There are no outstanding geographic features in these areas other than the remoteness of Bald Mountain proper. No perennial streams cross any of the areas although part of the area is bounded by the East Walker River and Sweetwater Creek.

Capability

The roadless area boundaries are drawn along the Forest boundary, large blocks of private land, and constructed roads in the major drainages. Numerous other unimproved roads cross these boundaries, particularly along the north and west sides of the Pine Grove Hills, and access some of the interior of Wiley and Lobdell. Because of difficult terrain, roads enter Bald Mountain only on the eastern boundary, where they are used for prospecting, grazing and woodcutting. Despite these intrusions, the boundaries as drawn, with minor changes to reflect the presence of constructed roads or significant uses, provide the most manageable boundaries for effective roadless area management.

The natural integrity and natural appearance of the areas are relatively high. Opportunities for primitive recreaton and solitude are present, particularly in the interior. However, these may be somewhat disrupted by prospectors, woodcutters, and grazing impacts. The general area enjoys clean pure air because of the absence of nearby sources of pollution.

Special features include numerous historic ruins relating to past mining activity, and the Sweetwater Research Natural Area in the southwest of Bald Mountain. The Sweetwater RNA was established in 1933 for the purpose of pinyon pine research.

Availability

Recreational use is primarily hunting with some use by four-wheel drive enthusiasts. Fishing is absent but the nearby East Walker River is a major fishing locality.

Wildlife is common throughout the area, and the canyons provide important habitat for sage grouse, mountain quail, chukar, and mule deer. There is deer winter range in the southwest of Bald Mountain.

Grazing use includes 211 AUMs for sheep in Lobdell, and 23 AUMs for sheep and 16 AUMs for cattle in Bald Mountain. The major limiting factor in grazing is water which has been trucked in to make better use of grazing capacity in the area.

There is no commercial timber in the area, however pinyon pine has been utilized for Christmas trees and dead and/or down fuelwood. An area in the southwest corner of Bald Mountain has been extensively used by local woodcutters.

The vicinities of Pine Grove, Rockland, the East Walker River, the Cowboy Mine, and the Sweetwater Natural Area have been heavily prospected by individual miners and mining companies. Many mining claims have been located in and around the Sweetwater RNA, the north side of East Walker River (the historic Washington Mining District), and areas peripheral to the historic mining districts of Pine Grove and Rockland. Recent mineral exploration in the form of trenching has taken place in the Sweetwater RNA for Tungsten, precious metals and rare earths, in Nye Canyon for uranium and molybdenum, and west of Flying "M" Ranch for uranium. Roads relating to these activities are identified on the map for possible roadless area boundary adjustments. Though no recent work has been done within the roadless areas near Pine Grove to Rockland, there is ample evidence of surface and underground exploration and possible mining here from the 19th century through the 1950's. The northern part of the Pine Grove Hills (including Lobdell and Wiley) is classified as having high mineral potential. In Bald Mountain, the southern portion stretching from the East Walker River to the Sweetwater RNA is classified as having moderate potential, while the central core area is classified as low potential. There has been some interest in geothermal along the East Walker River and this same area was under U.S. Department of the Interior-issued Prospecting Permits for alunite, which is classified as a leasable mineral. Immediately outside the north boundary of Lobdell is the Wilson Spring Known Geothermal Resource Area (KGRA), but there has been no exploration or leasing within the roadless ares itself.

Both historic and prehistoric cultural resources are present throughout these areas. Extensive prehistoric use of the pinyon-juniper zone is evidenced by numerous lithic scatters and rock features. These include rock rings, houses and caches. Historically, the area has been heavily mined and there are remains of old mining camps and prospects. Wood procurement for timbers and cordwood is evident.

No rights-of-way have been granted within the boundaries of the roadless areas. The Sweetwater RNA, described above, is closed to motor vehicles and woodcutting; however, it is not withdrawn from mineral entry. Mineral exploration work on mining claims has been occurring within the RNA boundaries for the last 30 years.

All land within the roadless areas is National Forest System land with the exception of about 290 acres in Bald Mountain. Permanent improvements in these areas include the above-mentioned roads, several isolated structures, and several drift fences and livestock water developments. Fire hazard is rated as moderate to high. There is an extensive bark beetle kill area in pinyon pine near Bald Mountain proper. The rest of the area is not experiencing serious insect or disease problems.

Need

These roadless areas are located within 30 miles of Yerington, Nevada, 20 miles north of Bridgeport, California, and about 30 miles from the Hoover Wilderness.

During the RARE II process, the gerneral public in Mono and Lyon Counties was made aware of the roadless area evaluation. The majority of the local population and the local governments favor non-wilderness uses for these areas.

These roadless areas were not recommended for wilderness or further planning under RARE II. They have not been included in any proposed wilderness legislation.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Lobdell

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E	Alt. G	Alt. H
Wilderness							29.1		
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		29.1	29.1	29.1	29.1	29.1		29.1	29.1
Stewardship Wildlife, Range & Dispersed Rec.	29.1								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Lobdell*

Management Description		A	B	C	D	E	F	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	5	5	5	5	5	5	0	5	5
Dispersed Recreation	MRVD	12.6	25.3	25.3	25.3	25.3	25.3	7.6	25.3	25.3
Wildlife	MWFUD	2.6	9.6	9.6	9.6	9.6	9.6	2.6	9.6	9.6
Wildlife Habitat Improvement	Acres	259	369	369	369	369	369	0	369	369
Fuel Management	Acres	19	19	19	19	19	19	34	19	19
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Lobdell

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	29.1	0	0
Integrity/ Naturalness (Int./Nat.)	Mining wildlife hab. impr. & wood products Int./Nat moderate	Same as Alt. A --------------------------------------->					No woodcutting Int./Nat increase to mod./high	Same as Alt. A ---------->	
Solitude	No change Oppor. for solitude will remain low	Same as Alternative A --------------------------------------->					ORV restriction solitude increases to moderate	Same as Alt. A ---------->	
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A--->							
Challenging Experience	Limited opportunity	Same as Alternative A --->							
Special Features	Not represented	Same as Alternative A --->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

Effects of Wilderness/Nonwilderness Designation Until the Next Plan Revision None of these areas is recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed in all three areas. Lobdell, Wiley and Bald Mountain are expected to be available for wilderness consideration during the next plan revision; however, portions of all three areas have high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the areas.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Wiley

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							6.3		
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		6.3	6.3	6.3	6.3	6.3		6.3	6.3
Stewardship Wildlife, Range & Dispersed Rec.	6.3								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Wiley*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	1
Dispersed Recreation	MRVD	2.7	5.5	5.5	5.5	5.5	5.5	1.6	5.5	5.5
Wildlife	MWFUD	.5	2.0	2.0	2.0	2.0	2.0	.5	2.0	2.0
Wildlife Habitat Improvement	Acres	63	90	90	90	90	90	0	90	90
Fuel Management	Acres	5	5	5	5	5	5	8	5	5
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Wiley

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS ACRES	0	0	0	0	0	0	6.3	0	0
Integrity/ Naturalness (Int./Nat.)	Wildlife hab. impr. & wood prod. Int./Nat. mod./high	Same as Alt. A	---------->				Int./Nat will remain mod./high	Same as Alt. A	---------->
Solitude	No change oppor. for solitude will remain low	Same as Alt. A	---------->				ORV restriction solitude will increase to moderate	Same as Alt. A	---------->
Primitive Recreation	No change oppor. for prim. rec. will remain low	Same as Alt. A	---------->						
Challenging Experience	Limited opportunity	Same as Alt. A	---------->						
Special Features	Not represented	Same as Alt. A	---------->						

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

Effects of Wilderness/Nonwilderness Designation Until the Next Plan Revision. None of these areas is recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed in all three areas. Lobdell, Wiley and Bald Mountain are expected to be available for wilderness consideration during the next plan revision; however, portions of all three areas have high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the areas.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Bald Mountain

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			69.2				69.2	69.2	
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		69.2		69.2	69.2	69.2			69.2
Stewardship Wildlife, Range & Dispersed Rec.	69.2								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Bald Mountain*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	12	12	0	12	12	1	0	0	0
Dispersed Recreation	MRVD	30.1	60.3	18.0	60.3	60.3	60.3	18.0	18.0	60.3
Wildlife	MWFUD	6.3	22.8	6.3	22.8	22.8	22.8	6.3	6.3	22.8
Wildlife Habitat Improvement	Acres	681	972	0	972	972	972	0	0	5
Fuel Management	Acres	49	49	90	49	49	49	90	90	49
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

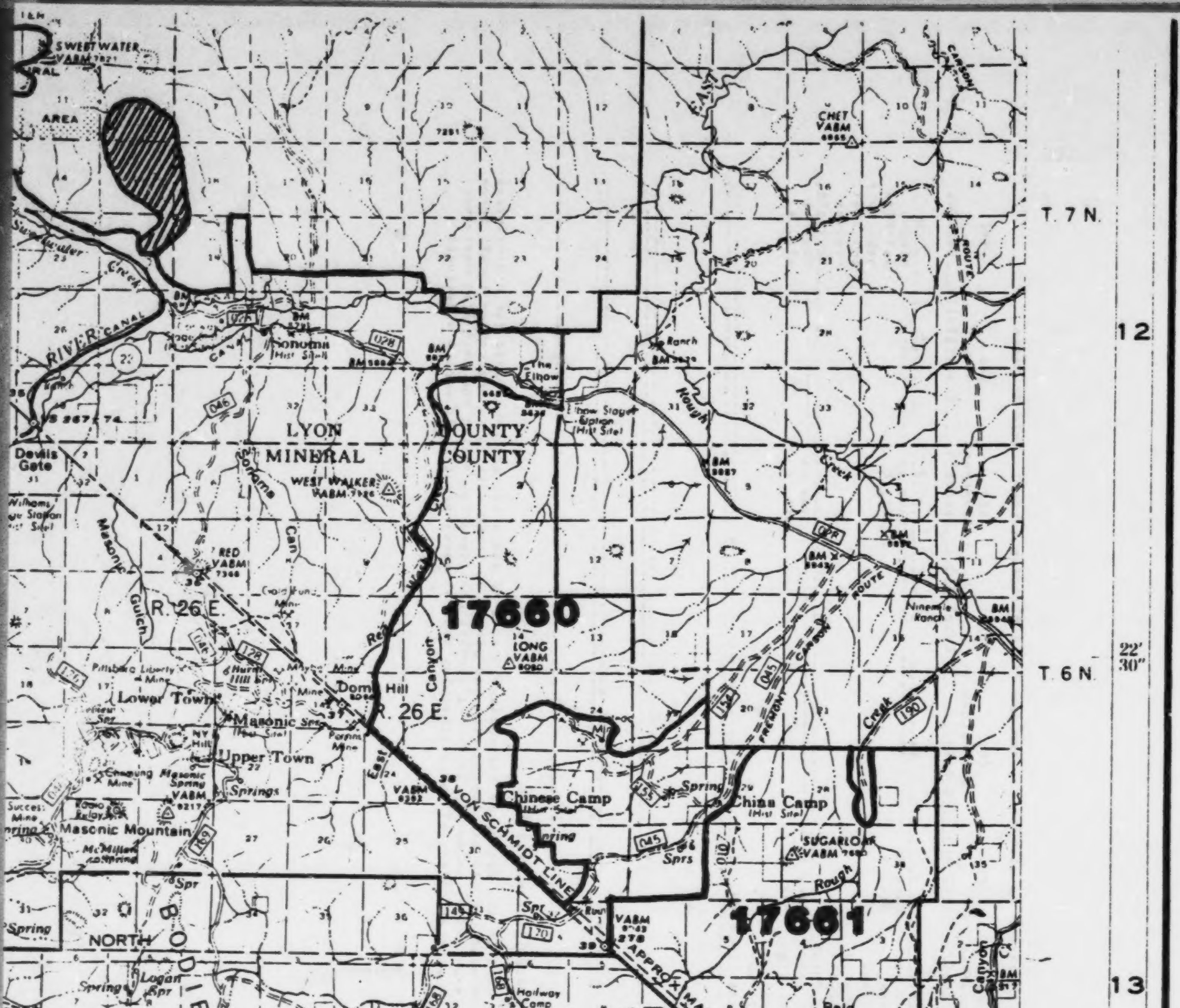
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Bald Mountain

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	69.2	0	0	0	69.2	69.2	0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. & wood products Int./Nat moderate	Same as Alt. A	Reduced mining no wood products Int/Nat. mod./high	Same as Alt. A	------------>	------------>	Same as Alt. C	------------>	Mining, wildlife hab. impr Int./Nat. remains moderate
Solitude	No change oppor for solitude will remain moderate	Same as Alt. A	ORV restriction solitude will increase to high	Same as Alt A	------------>	------------>	Same as Alt. C	------------>	Same as Alt. A
Primitive Recreation	No change Oppor. for prim. rec. will remain mod./low	Same as Alt. A	------------>	------------>	------------>	------------>	------------>	------------>	------------>
Challenging Experience	Limited opportunity	Same as Alt. A	------------>	------------>	------------>	------------>	------------>	------------>	------------>
Special Features	Sweetwater RNA	Same as Alt. A	------------>	------------>	------------>	------------>	------------>	------------>	------------>

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

None of these areas is recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed in all three areas. Lobdell, Wildy and Bald Mountain are expected to be available for wilderness consideration during the next plan revision; however, portions of all three areas have high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the areas.



17660 LONG

17661 SUGAR LOAF

Roadless Area Names:	Net Acres:
Long, #17660	8700
Sugarloaf, #17661	8932

Description

The Long, and Sugarloaf roadless areas have been combined for evaluation purposes because of their similar character, location, activity, capability and availability. These areas are northeast of Bridgeport and lie along the state line in Mono County, California, and Mineral and Lyon Counties, Nevada, on the north side of the Bodie Hills. Access is provided from California Route 182 and the Sweetwater-Hawthorne road by low standard roads and jeep trails. These roads generally define the boundaries and separate the roadless areas.

The climate of these areas is strongly influenced by the eastern Sierra rain shadow and elevation. Mean annual precipitation ranges from 5 to 15 inches with the bulk occurring in the winter as snow. Cool summers and cold winters characterize the areas' temperature regime. The areas are characterized by pinyon-juniper woodlands, sagebrush flats and slopes, and deep, bare rocky gorges. Isolated stands of aspen are found in the higher elevations and small groups of Jeffrey pine are often located in the drainages in the lower areas. The Intermountain sagebrush province - pinyon-juniper woodland ecosystem is represented here.

Current use includes dispersed motorized and non-motorized recreation, hunting, grazing, fuelwood cutting and mineral exploration.

There are no outstanding geographic features in these areas. Rough Creek, which crosses Sugarloaf, is the only perennial stream within any of these roadless areas. Principle attractions in the area include historical ruins associated with mining activity in nearby Bodie and Masonic. There are sensitive plants within this area.

Capability

These roadless area boundaries are drawn along the Forest boundary and important access roads. Numerous unimproved roads enter the roadless areas. These are mostly related to mineral prospecting, hunting, and to a lesser extent, recreation and woodcutting. None of these roads within the roadless areas have been upgraded or reconstructed recently. The boundaries, as drawn, probably provide the most manageable boundaries for effective wilderness or roadless area management.

The natural integrity and appearance of these areas are high. Opportunities for recreation and solitude may be somewhat disrupted by frequent use of these areas by prospectors and hunters. The general area enjoys clean, pure air because of the absence of nearby sources of pollution. The areas have little diversity or opportunity for primitive recreation, and the opportunity for challenge is low.

Special features include numerous prehistoric archaeological sites, including rock rings, chipping stations and campsites. Historic ruins, trails, and prospects are common throughout the area, related to the late 19th and early 20th century mining towns of Bodie, Aurora and Masonic.

Availability

Recreation use is primarily hunting, with some use by sightseers and ORV users.

As described above, vegetation includes pinyon-juniper, sagebrush, and scattered aspen and Jeffrey pine. Wildlife is abundant throughout the area, including mule deer and antelope.

Grazing use totals 253 AUMs with all areas within established grazing allotments. There is no commercial timber in the area; however, dead and/or down pinyon is harvested for fuelwood. Christmas tree cutting is fairly common. Fire hazard is rated as low. There are no significant insect or disease problems.

As stated above, these areas have been under examination by mining companies because of their high mineral potential and proximity to the historic mining districts of Bodie, Aurora and Masonic. Mining claim blocks have been staked throughout these roadless areas, particularly near Masonic in Devils Gate. South of the East Walker River in Long and around Bald Peak in Sugarloaf mining claim blocks are also present. The Bald Peak-Beauty Peak area has seen recent drilling and trenching completed as part of Homestake Mining Company's exploration for precious metals throughout the Bodie Hills area. Some potential for aluminum exists as seen by past exploration. The entire area is classified as having high mineral potential. There has been only limited interest in leasable minerals (geothermal).

There are currently no rights-of-way or withdrawals in the area. There are no permanent improvements aside from the above mentioned mineral exploration, as well as some fences and livestock water developments. The roadless areas are entirely National Forest System lands except for 760 acres of private land in Sugarloaf.

Need

These roadless areas are within 15 miles of Bridgeport and about 25 miles from the Hoover Wilderness.

During the RARE II process, the general public in Mono, Mineral, and Lyon Counties was made aware of the roadless area evaluation. The majority of the local population and the local governments favored non-wilderness uses for these areas. These roadless areas were not recommended for wilderness or further planning under RARE II. These areas have not been included in any proposed wilderness legislation.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Long

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness					8.7		8.7		
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		8.7	8.7	8.7		8.7		8.7	8.7
Stewardship Wildlife, Range & Dispersed Rec.	8.7								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Long*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	2	2	2	0	2	0	2	2
Dispersed Recreation	MRVD	5.3	10.5	10.5	10.5	3.1	10.5	3.1	10.5	10.5
Wildlife	MWFUD	1.0	4.0	4.0	4.0	1.0	4.1	1.0	4.0	4.0
Wildlife Habitat Improvement	Acres	120	171	171	171	0	171	0	171	171
Fuel Management	Acres	9	9	9	9	16	9	16	9	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Long

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	8.7	0	8.7	0	0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife, hab. impr. and wood products Int./Nat mod./high	Same as Alternative A ---------->			Reduced mining no wood products Int./Nat. high	Same as Alt. A	Same as Alt. E	Same as Alt. A ---------->	
Solitude	No change oppor. for solitude will remain moderate	Same as Alternative A ---------->			ORV restriction solitude will increase mod/high	Same as Alt. A	Same as Alt. E	Same as Alt. A ---------->	
Primitive Recreation	No change oppor. for prim. rec. will remain moderate	Same as Alternative A ---------->							
Challenging Experience	Limited opportunity	Same as Alternative A ---------->							
Special Features	Not represented	Same as Alternative A ---------->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

These areas are not recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed in both areas. Long and Sugarloaf are expected to be available for wilderness consideration during the next plan revision, however, all of the areas have high mineral potential, and unscheduled mineral development could impact wilderness characteristics.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Sugarloaf

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							8.9		
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.			8.9	8.9	8.9	8.9			8.9
Stewardship Wildlife, Range & Dispersed Rec.	8.9								
Market Opportunities (Timber and/or Grazing)		8.9						8.9	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Sugarloaf*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	2	1	1	1	1	0	2	1
Dispersed Recreation	MRVD	3.9	2.1	7.8	7.8	7.8	7.8	2.3	2.1	7.8
Wildlife	MWFUD	.8	.8	3.0	3.0	3.0	3.0	.8	.8	3.0
Wildlife Habitat Improvement	Acres	78	0	112	112	112	112	0	0	112
Fuel Management	Acres	6	10	6	6	6	6	10	10	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

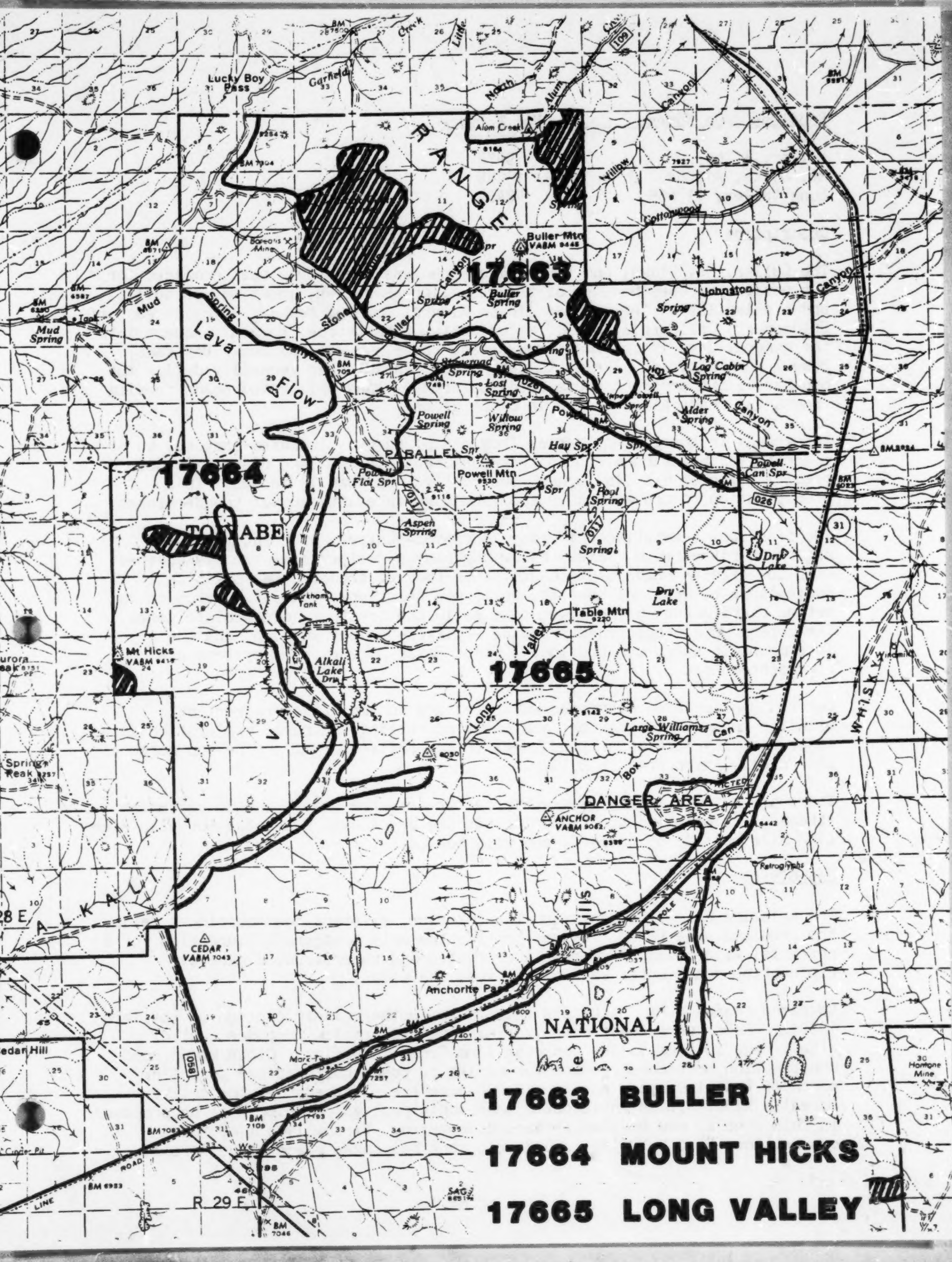
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Sugarloaf

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	8.2	0	0
Integrity/ Naturalness (Int./Nat.)	Wildlife hab. impr. & wood products Int./Nat. is moderate	Mining, & wood products Int./Nat. remains moderate	Same as Alternative A ------------------------>				Reduced mining, no wood products Int./Nat. mod./high	Same as Alt. B	Same as Alt. A
Solitude	No change oppor for solitude will remain mod.	Same as Alternative A ------------------------>					ORV restriction solitude increases to mod./high	Same as Alt. A ------------>	
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A ------------------------>							
Challenging Experience	Limited opportunity	Same as Alternative A ------------------------>							
Special Features	Not represented	Same as Alternative A ------------------------>							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

These areas are not recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed in both areas. Long and Sugarloaf are expected to be available for wilderness consideration during the next plan revision, however, all of the areas have high mineral potential, and unscheduled mineral development could impact wilderness characteristics.



17663
17664
17665
RANGE
TOIYABE
NATIONAL
Lucky Boy Pass
Buller Mtn VABM 9445
Powell Mtn
Mt Hicks VABM 9415
Table Mtn
Lava Flow
DANGER AREA
Anchorite Pass
CEDAR VABM 7043
ANCHOR VABM 9062
Alkali Lake Dry
Dry Lake
Powell Spring
Buller Spring
Lost Spring
Willow Spring
Aspen Spring
Pool Spring
Alder Spring
Log Cabin Spring
Large Williams Spring
Mud Spring
Alum Creek
Garfield
Johnston
Petroglyphs
Hanlone Mine
R 29 E
17663 BULLER
17664 MOUNT HICKS
17665 LONG VALLEY

Roadless Area Names:	Net Acres:
Buller, #17663	9478
Mt. Hicks, #17664	13948
Long Valley, #17665	48469

Description

The Buller, Mt. Hicks, and Long Valley roadless areas have been combined for evaluation purposes because of their similar character, location, capability and availability. These areas lie in Mineral County, Nevada, 30 miles east of Bridgeport, California, and 10 miles south of Hawthorne, Nevada. Access into the general area is provided from Nevada Route 359 via the Lucky Boy Pass, Powell Mountain, and Alkalai Valley Roads. These roads generally define the boundaries and separate these roadless areas. Many unimproved roads feeding from these roads allow access into the areas.

Topography in these areas varies from steep, rugged, isolated canyons, to moderately steep slopes, to large bench areas and dry lake flats. Annual precipitation is 5 to 15 inches, but mostly less than 10 inches. This precipitation occurs as winter snow and high intensity summer thunderstorms.

The principal vegetative community is pinyon-juniper, with interspersed sagebrush-bitterbrush. Areas below the pinyon-juniper are normally covered with low sage or shadscale communities. Lack of ground cover makes soil susceptible to erosion; however, soils are relatively stable and erosion is not as significant in the lower zone as in the crest of intermediate zones. The Intermountain sagebrush province - pinyon-juniper woodland and the Intermountain sagebrush province - Great Basin sagebrush ecosystems are represented here.

Current use includes dispersed motorized and non-motorized recreation, wildlife management, grazing, and fuelwood cutting. Mineral exploration is a major activity particularly adjacent to the active Borealis Mine and north of the Powell Canyon area in Buller.

There are no outstanding geographic features in the areas, and no perennial streams. Principal attractions include the dry Alkali Lake, the Borealis Mine (1/2 mile outside of Buller), and wild horses.

Capability

The existing Forest boundary and the interior, existing road corridors define the roadless area boundaries and provide the only manageable boundaries for a potential wilderness. Numerous constructed and unconstructed mineral exploration roads enter each of the roadless areas.

Upgraded roads on Mt. Hicks are related to geothermal exploration of the late 1970's. Roads were constructed for mineral exploration purposes east of Alkali Lake in Long Valley and near Alum Creek in Buller. Other major road construction or reconstruction for mining purposes has occurred in Buller north of Powell Canyon, and in a 2,000 acre area just east of the active Borealis Mine. It is anticipated that additional gold mining will be proposed in this area as new ore bodies area discovered. Virtually all of the exploration, road building, and development has taken place since Rare II.

The roadless area surrounding the military demolition area in Long Valley is directly influenced by this activity. This bomb disposal site is operated under special use permit but a new Memorandum of Agreement between the Forest Service and the Department of the Army-Hawthorne Army Ammunition Plant (HWAAP) is being developed. This site has been in use since World War II. The roadless area boundary excludes it, but a considerable amount of shrapnel and other debris has landed outside the permitted use area and within the roadless area. The "restricted area" boundary is in the process of being redefined to more accurately encompass the impacted area.

Except for the above uses, the natural integrity and appearance of the area is high. The opportunity for solitude in these areas, away from the mineral exploration and bomb disposal site, is considered moderate because of moderate topographic screening and dense vegetation screening. The area enjoys clean pure air because of the absence of nearby sources of pollution, with the major exception of the colorful, acrid smoke from exploded ordnance at the bomb disposal site. These areas have little diversity or opportunity for primitive recreation and the opportunity for challenge is low.

Special features include an abundance of archaeological sites throughout the three roadless areas. These are campsites, wildlife traps, hunting blinds, quarries, house structures and chipping sites present. A number of sensitive plant species are known to occur.

Availability

Recreational use consists primarily of hunting.

The Mt. Hicks and Buller areas are spring and fall range for mule deer. Long Valley includes deer winter range. A small herd of antelope utilize portions of the three roadless areas at various times of the year. No fishable streams are present. Populations of chukar and sage grouse exist.

Watershed values of these areas are low due to the low amount of precipitation. Existing water sources are very important for wildlife, livestock and wild horses. Some opportunities exist to improve this situation through further development of water sources.

All of these areas are within established grazing allotments, with the exception of a portion of Long Valley which is closed because of deer winter ranges. Grazing use is limited and amounts to 334 AUMs. These areas have low potential for range revegetation practices due to low rainfall.

The Powell Mountain Wild Horse and Burro Territory includes all of these roadless areas. The territory for this herd centers around Mt. Hicks, but use ranges into the Powell Mountain area. An estimated 75% of this use occurs between Mt. Hicks and Alkali Lake. The population of the herd is between 40 and 50 animals. Since 1971, this territory has been managed under the direction of the Wild Horse and Burro Act of 1971. Management has included the round-up and removal of 15 excess horses with the use of helicopter in 1983. Radio collaring and tracking devices have also been employed with the use of aircraft to gather relevant herd data.

No stands of commercial timber exist within these areas. Pinyon is harvested for fuelwood and Christmas trees. The only authorized harvest for fuelwood is for dead and/or down pinyon. Opportunities for green wood sales are limited at this time due to lack of access into the best stands and distances from population centers. There are no significant insect or disease problems.

Buller and Long Valley are generally classified as having high mineral potential, based on the presence of known mineralization in the nearby Lucky Boy, Aurora, and Marietta mining districts as well as the active mine at Borealis. Gold and silver have been the main interest here but there has been exploration for copper, tungsten and molybdenum. Mt. Hicks is classified as having moderate mineral potential based on the presence of rhyolites and andesites in the 17 to 6 million year age range and the proximity and similarity to the mineralization at Bodie and Aurora (shear zone gold and silver deposits). Part of Mt. Hicks is under 3 geothermal leases, related to an extensive geothermal lease block centered around Aurora.

These units are known to have high archaeological sensitivity, both prehistoric and historical. Numerous sites have been recorded.

There are no known withdrawals or rights-of-way within these areas. Approximately 400 acres of private land lies within Long Valley. As described above, the boundary of the U.S. Army Bomb Disposal Site will likely be expanded to encompass the currently impacted area. This would include part of the Long Valley roadless area. The only other permanent improvements in these areas are water developments. Fires, primarily lightning caused, occur here but most of these are naturally confined to single trees or small areas due to sparse ground cover.

Need

The nearest existing wilderness is the Hoover, 30 miles to the west. The nearest population centers are Hawthorne, Nevada, 10 miles north, and Bridgeport, California, 30 miles west.

During the RARE II process, the general public in Mineral County and surrounding counties was made aware of the roadless area evaluation. The majority of the public (85%) responding to RARE II favored non-wilderness uses for these areas.

These roadless areas were not recommended for wilderness or further planning under RARE II. These areas have not been included in any proposed wilderness legislation.

Since RARE II, the local population has remained opposed to wilderness classification for these areas primarily because of fuelwood cutting needs, mineral activity, and the fact that most local residents do not consider the areas "roadless." Individual miners and the mining companies also are opposed to wilderness classification because of high mineral potential and continued success in discovering new mineral deposits in and near these areas (particularly Buller).

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Buller

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							9.4		
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		9.4	9.4	9.4	9.4	9.4		9.4	9.4
Stewardship Wildlife, Range & Dispersed Rec.	9.4								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Buller*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	2	2	2	2	2	0	2	2
Dispersed Recreation	MRVD	4.1	8.2	8.2	8.2	8.2	8.2	2.5	8.2	8.2
Wildlife	MWFUD	.9	3.1	3.1	3.1	3.1	3.1	.9	3.1	3.1
Wildlife Habitat Improvement	Acres	93	133	133	133	133	133	0	133	133
Fuel Management	Acres	0	7	7	7	7	7	12	7	7
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Buller

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	2.6	0	0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. & wood products Int./Nat low	Same as Alternative A ------------------------------------>					Reduced mining no wood products Int/Nat. moderate	Same as Alt. A ------------>	
Solitude	No change oppor. for solitude will remain low	Same as Alterntive A ------------------------------------>					ORV restriction solitude will increase to moderate	Same as Alt. A ------------>	
Primitive Recreation	No change oppor. for prim. rec. will remain low	Same as Alternative A ------------------------------------>							
Challenging Experience	Limited opportunity	Same as Alternative A ------------------------------------>							
Special Features	Not represented	Same as Alternative A ------------------------------------>							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

These areas are not recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed in Buller and Long Valley while pinyon fuelwood cutting is prescribed in all three areas. Buller, Mt. Hicks and Long Valley are all expected to be available for wilderness consideration during the next plan revision, however, mineral potential is moderate for Mt. Hicks and high for Buller and Long Valley. Unscheduled mineral development could impact wilderness characteristics on some of the areas.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Mount Hicks

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							13.9		
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	13.9								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.		13.9	13.9	13.9	13.9	13.9		13.9	13.9
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Mount Hicks*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	3	3	3	3	3	3	0	3	3
Dispersed Recreation	MRVD	6.1	12.1	12.1	12.1	12.1	3.3	3.6	12.1	12.1
Wildlife	MWFUD	1.3	4.6	4.6	4.6	4.6	1.3	.6	4.6	4.6
Wildlife Habitat Improvement	Acres	141	201	201	201	201	0	0	201	201
Fuel Management	Acres	10	10	10	10	10	19	19	10	10
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Mount Hicks

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	13.9	0	0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. & wood products Int./Nat low/moderate	Same as Alternative A		----------------------->		Mining & wood products Int./Nat. remains low/ moderate	Reduced mining no wood products Int/Nat. moderate	Same as Alt. A	------------->
Solitude	No change oppor. for solitude will remain low	Same as Alterntives A		------------------------------------->			ORV restriction solitude will increase to moderate	Same as Alt. A	------------->
Primitive Recreation	No change oppor. for prim. rec. will remain low	Same as Alternative A		-->					
Challenging Experience	Limited opportunity	Same as Alternative A		-->					
Special Features	Not represented	Same as Alternative A		-->					

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

These areas are not recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement in Buller and Long Valley while pinyon fuelwood cutting is prescribed in all three areas. Buller, Mt. Hicks and Long Valley are all expected to be available for wilderness consideration during the next plan revision; however, mineral potential is moderate for Mt. Hicks and high for Buller and Long Valley. Unscheduled mineral development could impact wilderness characteristics on some of the areas.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Long Valley

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			48.4				48.4	48.4	
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	48.4								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.		48.4		48.4	48.4	48.4			48.4
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Long Valley*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	8	8	0	8	8	8	0	0	8
Dispersed Recreation	MRVD	21.1	42.2	12.6	42.2	42.2	42.2	12.6	12.6	42.2
Wildlife	MWFUD	4.4	15.9	4.4	15.9	15.9	15.9	4.4	4.4	15.9
Wildlife Habitat Improvement	Acres	467	667	0	667	667	667	0	0	0
Fuel Management	Acres	34	34	62	34	34	34	62	62	34
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

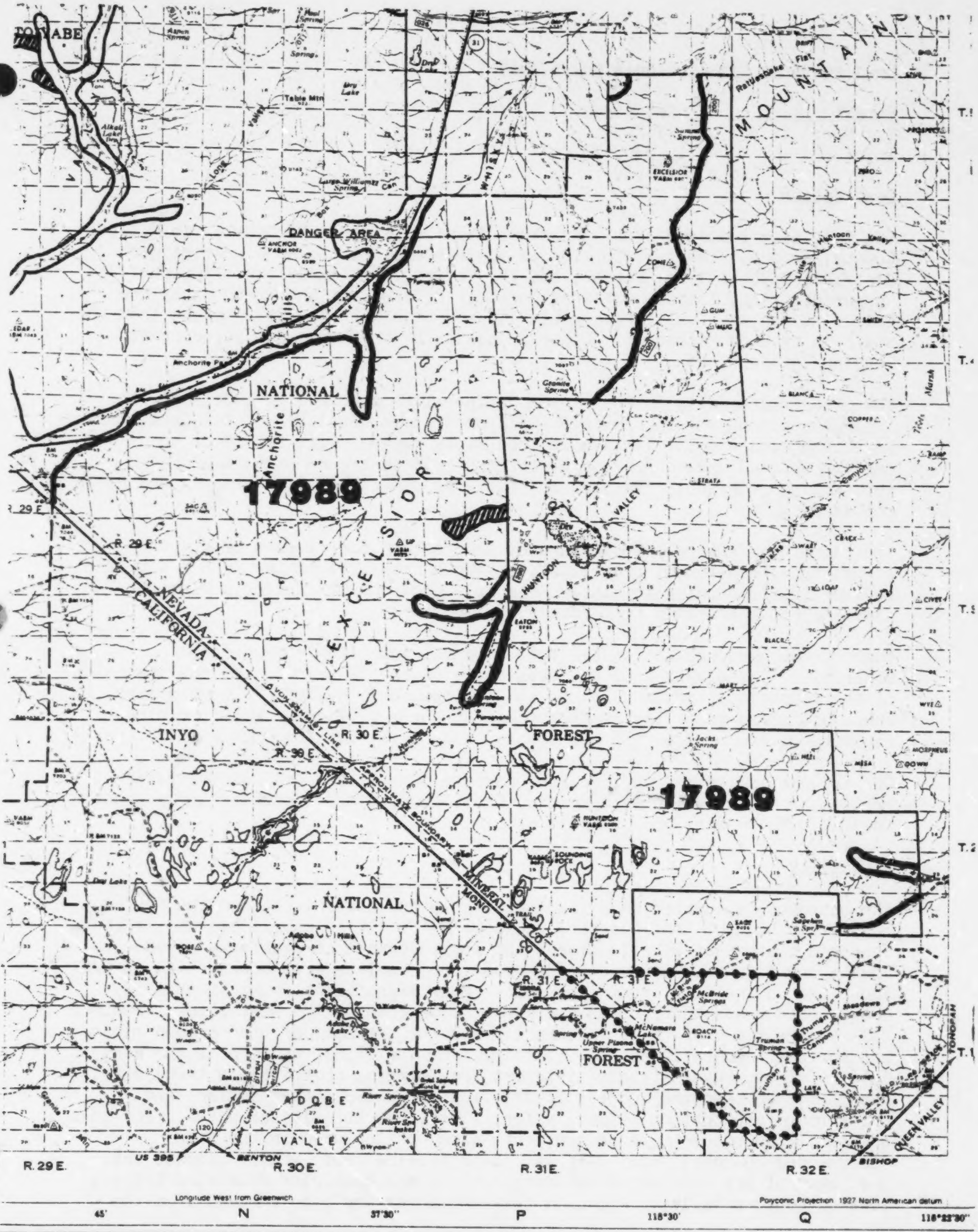
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Long Valley

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1990 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	58.6	0	0	0	58.6	58.6	0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. & wood products Int./Nat low	Same as Alt. A	Reduced mining no wood products Int./ Nat. moderate	Same as Alt. A	------------>	------------>	Same as Alt. C	Same as Alt. C	Mining, & wood products Int/Nat. remains low
Solitude	No change oppor. for solitude will remain low/ moderate	Same as Alt. A	ORV restriction solitude will increase to moderate	Same as Alt. A	------------>	------------>	Same as Alt C	Same as Alt. C	Same as Alt. A
Primitive Recreation	No change oppor. for prim. rec. will remain low	Same as Alternative A	------------>	------------>	------------>	------------>	------------>	------------>	------------>
Challenging Experience	Limited opportunity	Same as Alternative A	------------>	------------>	------------>	------------>	------------>	------------>	------------>
Special Features	Not represented	Same as Alternative A	------------>	------------>	------------>	------------>	------------>	------------>	------------>

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

These areas are not recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement in Buller and Long Valley while pinyon fuelwood cutting is prescribed in all three areas. Buller, Mt. Hicks, and Long Valley are all expected to be available for wilderness consideration during the next plan revision, however, mineral potential is moderate for Mt. Hicks and high for Buller and Long Valley. Unscheduled mineral development could impact wilderness characteristics on some of the areas.

17989
17989
DANGER AREA
NATIONAL
FOREST
INYO
NATIONAL
FOREST
EXCELSIOR
MOUNTAINS
NEVADA
CALIFORNIA
MINERAL
MONO
Anchorite Hills
Anchorite Pass
HUNTOON VALLEY
ADOBE VALLEY
Table Mtn
Dry Lake
Rattlesnake Flat
Granite Spring
Jacks Spring
McBride Springs
McNamara Lake
Upper Piscona Spring
Truman Spring
Truman Canyon
Adobe Lake
River Spring
Dry Lake
R. 29 E.
R. 30 E.
R. 31 E.
R. 32 E.
US 395
BENTON
BISHOP
TONOPAH
QUEEN VALLEY
Longitude West from Greenwich
Polyconic Projection 1927 North American datum
45'
N
37'30"
P
118°30'
Q
118°22'30"

EXCELSIOR

Roadless Area Name: Excelsior, #17989

Forest	Net Acres
Toiyabe:	116290
Inyo:	8300
Total	124590

Description

The Excelsior roadless area lies about 15 miles east of Mono Lake, in Mineral County, Nevada. The Inyo portion is administered by the Mono Lake Ranger District, Inyo National Forest, and the Toiyabe portion by the Bridgeport Ranger District, Toiyabe National Forest. Access from the north is by the Pole Line Highway (California Route 167 and Nevada Route 359); access from the south is by U.S. Highway 6. Other access is by the many unimproved roads leading into the area.

The area is primarily in the pinyon-juniper life zone and includes both the Intermountain sagebrush province - pinyon-juniper woodland and the Great Basin sagebrush ecosystems. Terrain is moderately rugged, with few seeps and springs but no lakes or perennial streams. There are no particularly outstanding geographic features in this area other than its vastness and harsh conditions.

The climate is strongly influenced by the eastern Sierra rain shadow and elevation. Mean annual precipitation ranges from five to ten inches with the bulk of this occurring in winter as snow. Cool summers and cold winters characterize the area's temperature regime.

Most of the area has soils developed from volcanic flow rock parent materials. These vary from the deep soils of the valleys to the shallow soils of the mountain slopes. Volcanic ash and pumice is evident in many places. These soils are generally sandy throughout their profiles. Water holding capacity is low or moderate and erosion hazard is, for the most part severe.

Current use is minimal and includes dispersed motorized and non-motorized recreation and wildlife management. Grazing and mineral prospecting account for the bulk of activity in the area.

Capability

The boundary is identified by surrounding roads, powerlines, and the Forest boundary. Much of this boundary would be difficult to manage because of the ease and history of vehicle access and would require considerable expense to locate and sign. Unimproved roads cross the roadless area boundary in several locations on the west, north and east. Most significant among these are constructed roads that access two mining prospects on the west side of Huntoon Valley (see map). Each of these prospects was the site of underground mining and surface road building and trenching from the 1930's up through the early 1960's. These have attracted interest from mineral operators in the 1980's. Each site has been the subject of drilling as well as other surface and underground exploration primarily for silver, but to a lesser extent, for gold as well. The roads to these prospects were not included in the final recommended boundary under RARE II. Both provide ready vehicle access into that part of the roadless area lying east of the Excelsior Mountains proper, towards Huntoon Valley. Approximately 600 acres would be removed from the roadless area if the boundary were adjusted to exclude these access routes and mines.

The natural integrity and appearance of the area have been degraded to a low-to-moderate degree along the fringes to the north and east by the roads mentioned above. Opportunity for solitude is generally high but may be affected by several unimproved roads crossing the area. Opportunity for challenging, primitive, unconfined recreation is high. Although diversity is low, there are few trails and the area is very large.

Special features include an abundance of archaeological sites.

There are no extraordinary environments here but the vastness and remoteness of this country offer opportunities for future management as wilderness.

Availability

Recreational use is dominated by four-wheel drive enthusiasts, with hiking and big game hunting of lesser importance. The area receives an estimated 4,000 RVDs.

Grazing use is limited to about 430 AUMs. Water is generally unavailable except for seeps and springs. Wildlife numbers are small and species diversity is low. The area south of Huntoon Spring is important deer winter range. Approximately 10,000 acres are suitable for wildlife habitat manipulation. A sizeable herd of wild horses roams the area. The area supports extensive stands of pinyon and juniper and has potential for supplying fuelwood to parts of Mono and Inyo Counties, California, and Mineral County, Nevada. Some of the intrusions of the northern and southern edges of the area are related to fuelwood and Christmas tree cutting.

The northern two-thirds of the roadless area is considered to have high mineral potential. Most prospecting activity has been limited to the fringes of the area, particularly around the prospects mentioned above, but also around mineral patents and existing mines outside the Forest boundary to the north and on the west side of Huntoon Valley. There are also scattered mining claims in the interior of the roadless area, but there has been no significant activity on these. Five geothermal lease applications on the Toiyabe N.F., covering 12,383.46 acres south and west of Huntoon Spring have not been acted upon because of the Congressional Moratorium on processing of leases in wilderness and recommended wilderness areas.

Private land within the roadless area boundary includes a 40 acre parcel at Huntoon Spring and a 40 acre parcel at Jacks Spring.

There are minor bark beetle infestations within the pinyon-juniper stands, but these do not pose any serious problems.

This unit is known to have high archaeological sensitivity. Prehistorical sites include extensive lithic scatter, rock ring features, hunting blinds and drives, rock alignments, and petroglyphs.

Need

The California Wilderness Act of 1984 did not include the California portion of the Excelsior for wilderness. The Nevada portion of the Inyo National Forest (approximately 8,000 acres) as well as the Toiyabe portion is still available for wilderness consideration.

The nearest existing wilderness is the Hoover in the Sierra Nevada, 30 miles to the west. Hawthorne, Nevada, is the nearest population center, 20 miles north.

The wilderness recommendation under RARE II for this area was based primarily on the wilderness values in the Excelsior Mountains in Nevada. The pinyon-juniper ecosystem is well represented in this area, and this was one of the reasons the area was recommended for wilderness. If the area is designated wilderness by Congress, it should logically include both the Nevada and California portions.

During the RARE II process, 58% of the Nevada public favored wilderness, while in California 63% of the responding public favored wilderness. Local public involvement indicated little support for wilderness. Many local residents resist excluding vehicles from the area and do not consider the area as being "roadless." In addition, individual miners and mining companies have also objected to the "roadless" classification and do not believe that any wilderness designation should include the existing mine workings and access roads on the west side of Huntoon Valley.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Excelsior

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E	Alt. G	Alt. H
Wilderness	123.7		123.7	123.7	123.7		123.7	123.7	
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.									
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.		123.7				123.7			123.7
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Excelsior*

Management Description		A	B	C	D	E	F	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	15	0	0	0	15	0	0	15
Dispersed Recreation	MRVD	2.3	9.2	2.3	2.3	2.3	9.2	2.3	2.3	9.2
Wildlife	MWFUD	0	0	0	0	0	0	0	0	0
Wildlife Habitat Improvement	Acres	0	1180	0	0	0	1180	0	0	1180
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

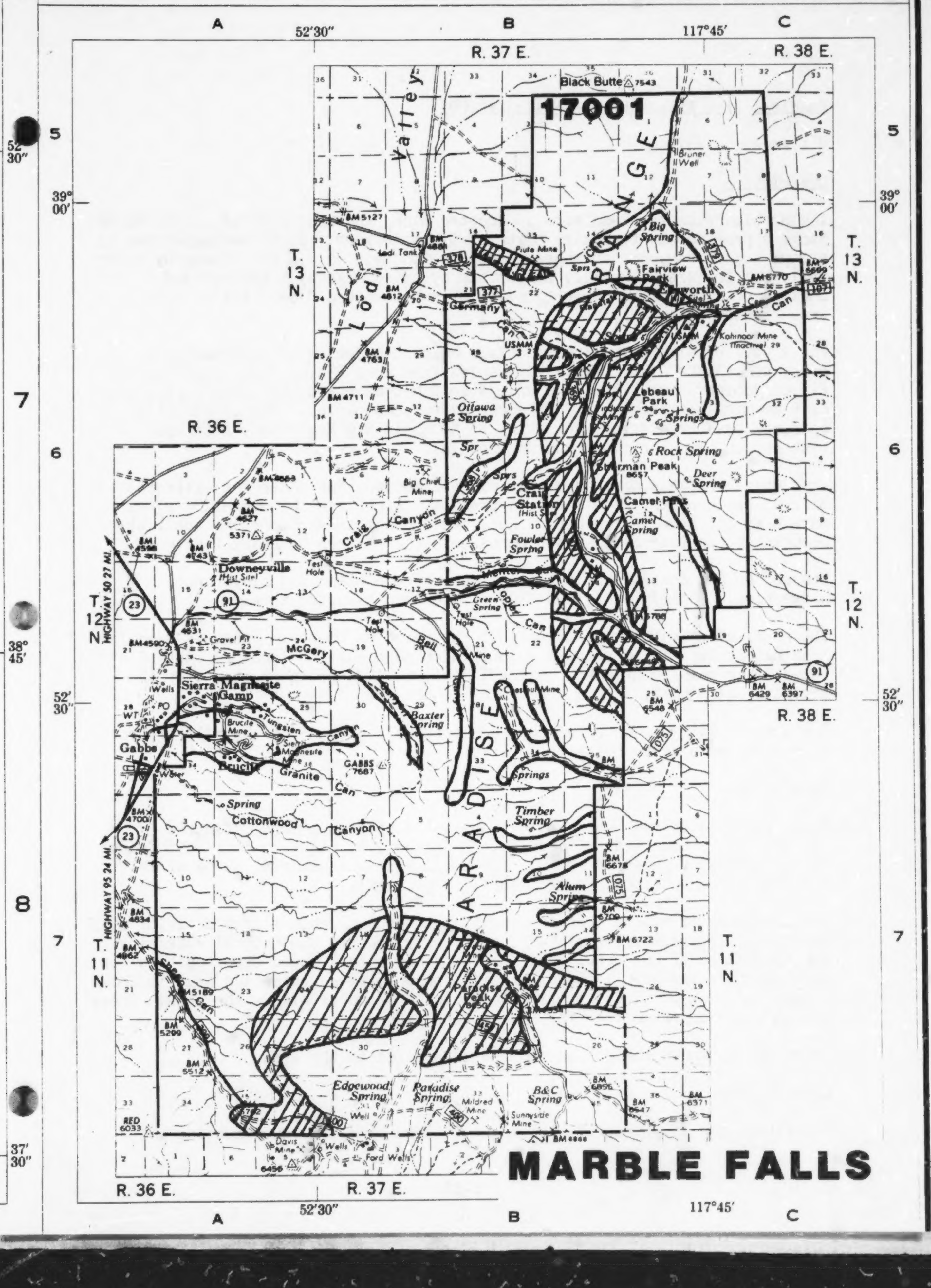
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Excelsior

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	123.7	0	123.7	123.7	123.7	0	123.7	123.7	0
Integrity/ Naturalness (Int./Nat.)	Reduced mining no wood products Int/Nat increase to moderate	Mining wildlife hab. impr. & wood products Int/Nat low/moderate	Same as Alt. A ------------------------------>			Same as Alt. B	Same as Alt. A ---------------->		Same as Alt. B
Solitude	ORV restriction solitude will increase to high	No change. Solitude will remain mod./high	Same as Alt. A ------------------------------>			Same as Alt. B	Same as Alt. A ---------------->		Same as Alt. B
Primitive Recreation	No change oppor. for prim. rec. will remain low	Same as Alternative A ==>							
Challenging Experience	Moderate opportunity	Same as Alternative A ==>							
Special Features	Not represented	Same as Alternative A ==>							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

These areas are not recommended for wilderness in the preferred alternative. Most of the areas are prescribed for nonintensive management or semi-primitive recreation. Some wildlife habitat improvement and pinyon fuelwood cutting is prescribed. The Excelsior area is expected to be available for wilderness consideration during the next plan revision, however, 60 percent of the areas has high mineral potential and unscheduled mineral development could impact wilderness characteristics.



MARBLE FALLS

Roadless Area Name: Marble Falls, #17001

Net Acres: 10375

Description

The Marble Falls roadless area is located along the west side of the Paradise Range approximately ten miles north of Gabbs, Nevada. It is characterized by steep, rugged canyons and appears to be a mountain d surrounded by desert valleys. The area is easily accessible by paved highway, improved and unimproved dirt roads. Several miles of sub-standard "jeep" trails also traverse the area.

The area lies within the Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem (3130-021). Vegetation varies from pure Pinyon Pine stands to Pinyon/Juniper communities. Openings in the tree canopy at lower elevations have Wyoming Big Sagebrush and Desert shrub communities. Higher elevation openings have vegetation consisting of Mountain Big Sagebrush, Antelope Bitterbrush, and various buchgrass species.

The entire roadless area is highly mineralized and has undergone extensive mineral exploration, both past and present. Eight mineral operating plans have been approved in the area. Fuelwood cutting is an important activity, occuring on approximately 2,500 acres near the eastern boundary (see map).

Recreation use consists primarily of mule deer hunting and pinyon nut harvesting. Approximatley 100 RVDs of use occurs in the area.

The area, along with the remainder of the Paradise Mountain Range is used for grazing cattle. It is managed jointly with adjacent BLM lands as part of a stewardship management plan. A total of 1,000 AUMs are permitted over the entire grazing unit, from mid-November to the end of May.

The area is within a proposed supersonic operating area for the military and is subjected to sonic booms on occasion.

Capability

There are no distinct topographic features to provide a more definable boundary for a potential wilderness. Manageability might be difficult due to the intrusion of numerous roads. The small size and elogated shape of the area may also contribute to manageability problems.

A high degree of mineralization resulting in considerable mining activity with associated land disturbances has dramatically lowered the natural integrity and appearance of the area. This activity has also reduced opportunities for solitude to a low level. Opportunities for primitive recreation are limited because of lack of water, trails, and special features within the area. There are also few opportunities for challenging experiences.

There are no known threatened/endangered species in the area.

Availability

Recreation use is primarily limited to fall hunting, fuelwood cutting and pinyon nut picking. There is little opportunity to increase either developed or dispersed recreation in the area.

Wildlife populations are low and not highly varied. Potential exists to further develop the timber resource through fuelwood harvest, commercial Christmas trees, and juniper posts. Pinyon nut gathering would also be enhanced by development of these other products.

Water is limited to a few small seeps or springs. Opportunities to increase water supplies are minimal.

The area is grazed by cattle as part of the Ione Stewardship Plan. Forage production is low because of the extent of the Pinyon/Juniper community. There is limited potential to increase production by reducing Pinyon-Juniper cover. No structural range improvements occur in the area.

The area between Marble Falls Canyon and Craig Canyon, about half of the roadless area, is highly mineralized as evidenced by the number of mining claims and exploration activities.

Archaeological sensitivity is expected to be low to moderate based on comparison with adjacent areas of known sensitivity.

The area has approximately 220 acres of non-National Forest land. There are no access or management problems associated with these lands.

Historical occurrence of fire has been low. Although the potential for a large brush fire exists no major fires have occurred recently. The majority of fires have been less than 1/4 acre is size.

Insect and disease problems do not occur on a large scale.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer Wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a Wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and Central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Marble Falls

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							10.4		10.4
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		10.4	10.4						
Stewardship Wildlife, Range & Dispersed Rec.	10.4			10.4	10.4	10.4		10.4	
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Marble Falls*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	185	185	185	185	185	185	185	185	185
Dispersed Recreation	MRVD	.7	.5	.5	.7	.5	.5	.5	.5	.5
Wildlife	MWFUD	.2	.2	.2	.2	.1	.2	.2	.2	.2
Wildlife Habitat Improvement	Acres	102	15	15	102	102	15	0	15	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

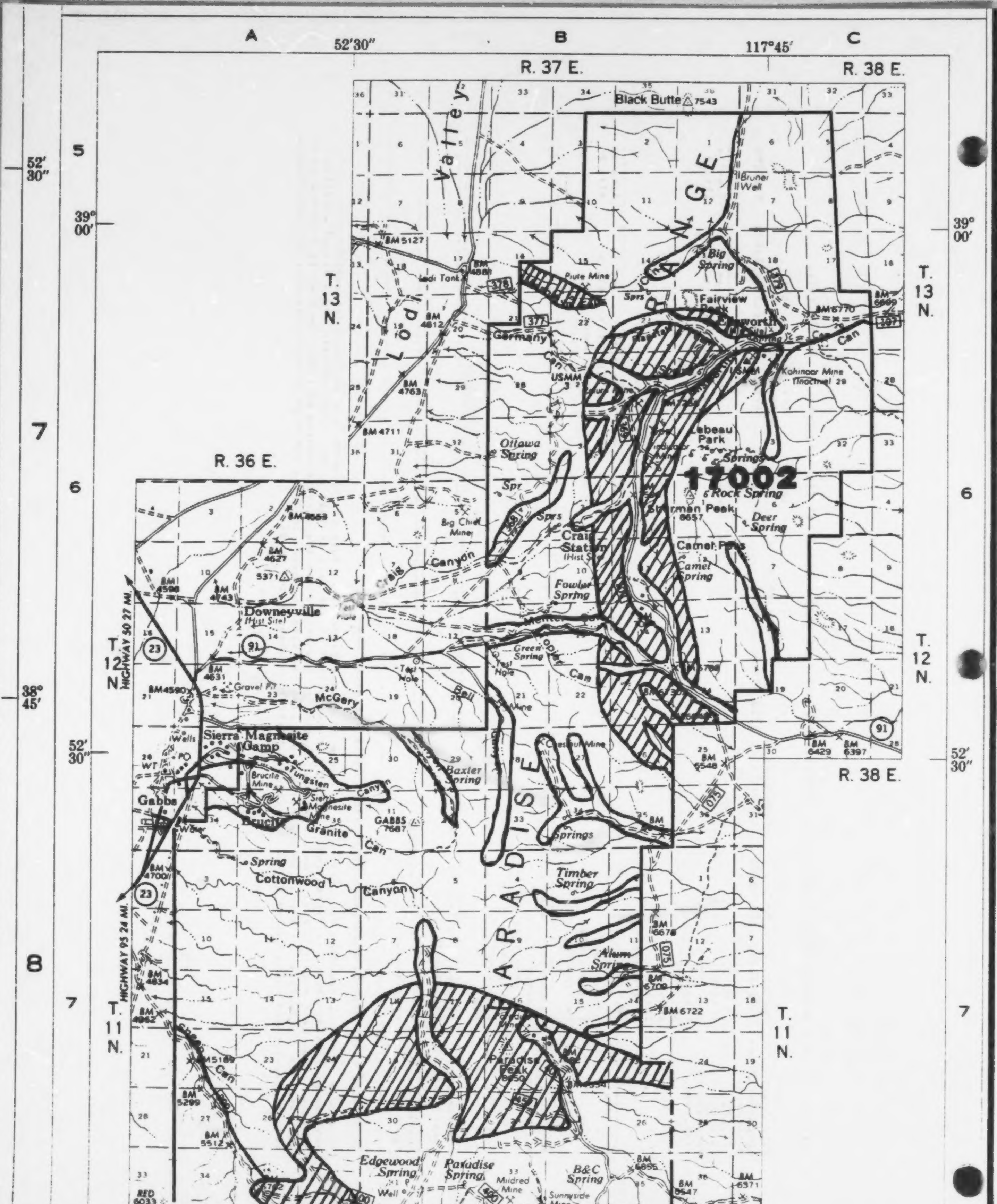
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Marble Falls

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	10.6	0	10.6
Integrity/ Naturalness (Int./Nat.)	Wildlife hab. impr. & wood products scheduled. Int./Nat. will remain very low.	Same as Alternative A ------------>					No change. Int./Nat. will remain very low.	Same as Alt. A	Same as Alt. F
Solitude	No change. Oppor. for solitude will remain low.	Same as Alternative A ------------>					ORV restriction will increase chance for solitude to low/mod.	Same as Alt. A	Same as Alt. F
Primitive Recreation	No Change. Opportunity for primitive recreation will remain low.	Same as Alternative A ------------>							
Challenging Experience	Limited opportunity	Same as Alternative A ------------>							
Special Features	Not represented	Same as Alternative A ------------>							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 150 acres of wildlife habitat improvement and 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



SHERMAN PEAK

Roadless Area Name: Sherman Peak, #17002

Net Acres: 7880

Description

The Sherman Peak roadless area is located in the northeast corner of the Paradise range approximately 10 miles east of Gabbs, Nevada and between the old town of Ellsworth and Brunton Pass. The entire Paradise Range has the appearance of a dark mountain island surrounded by desert valleys. The topography is steep and rocky at higher elevations, becoming more gentle and rolling on the eastern boundary.

The area is easily accessible by a two lane paved highway, an improved dirt road, and several unimproved dirt roads. There are several low standard "jeep" roads within the boundaries of the area.

The area lies within the Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem (3130-021). Closed pinyon-juniper communities occur at the higher elevations. At the lower elevations the trees give way to Wyoming Big Sagebrush and Desert Shrub communities.

The western one-third of the area, approximately 1500 acres is highly mineralized and has ongoing mineral exploration activity. In addition, fuel wood cutting is an important activity on the western boundary of the area (see map). Recreation use is light, consisting primarily of deer hunting and pinyon nut harvesting in the fall. The area receives about 100 RVDs of use annually.

The area is part of the Yomba Shoshone Tribe's grazing unit of the Ione Stewardship Management Plan. The entire unit consists of the Paradise Range and the Ione Valley. Cattle are permitted to use the unit from mid-November to the end of May.

The area is within a proposed supersonic operating area for the military and is subjected to sonic booms on occasion.

Capability

No topographic features exist to provide a more definable boundary for a proposed Wilderness. The unfenced Forest boundary and roads protruding into the area could create problems of management for wilderness.

The natural integrity and appearance of the area has been compromised by the extensive mineral exploration and development.

Opportunities for solitude are low because of ongoing mineral exploration activites. The existence of "jeep" roads and the relatively small size of the area also reduces the chances for solitude.

Opportunities for primitive recreation are limited due to a lack of water or trails in the area. There are few opportunities for challenging experiences.

There are no known threatened/endangered species in the area.

Availability

Recreation is limited to the fall hunting and pinyon nut gathering seasons. Few opportunities exist to increase developed or dispersed recreation.

Wildlife populations are low due to the lack of habitat diversity and water.

Potential exists to more intensively manage the pinyon-juniper communities in the area. Harvesting of fuelwood, Christmas trees, juniper posts, and pinyon nuts would be part of this management.

Water is limited to a few seeps or springs. Several of these have been developed for livestock use in the past, but are in need of reconstruction at the present time. Opportunities to increase water supplies within the area are minimal.

The area is grazed by cattle as part of the Ione Unit Stewardship Plan. Forage production is low because of the extensive pinyon/juniper communities and the lack of adequate precipitation. Opportunities to increase forage production are marginal and it would probably not be cost effective to do so except by doing some prescribed burning in select locations.

Due to the high level of mineralization in the area, there is a good potential for mining activity to increase.

Archaeological sensitivity is expected to be moderate to high based on comparison with adjacent areas of known sensitivity.

Insect and disease problems do not occur on a large scale.

There are about forty acres of private land in the vicinity of Camel Pass. This parcel poses no adverse effects on access or manageability.

Need

Nevada has one existing Wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a Wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 recreation visitor days (RVDs) per year and the Hoover Wilderness receives 72,000 RVDs annually.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Sherman Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							7.9		7.9
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		7.9						7.9	
Stewardship Wildlife, Range & Dispersed Rec.	7.9		7.9	7.9	7.9	7.9			
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Sherman Peak*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	137	137	137	137	137	137	137	137	137
Dispersed Recreation	MRVD	.5	.4	.5	.5	.4	.4	.4	.4	.4
Wildlife	MWFUD	.1	.1	.1	.1	.1	.1	.1	.1	.1
Wildlife Habitat Improvement	Acres	76	11	76	76	76	11	0	11	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

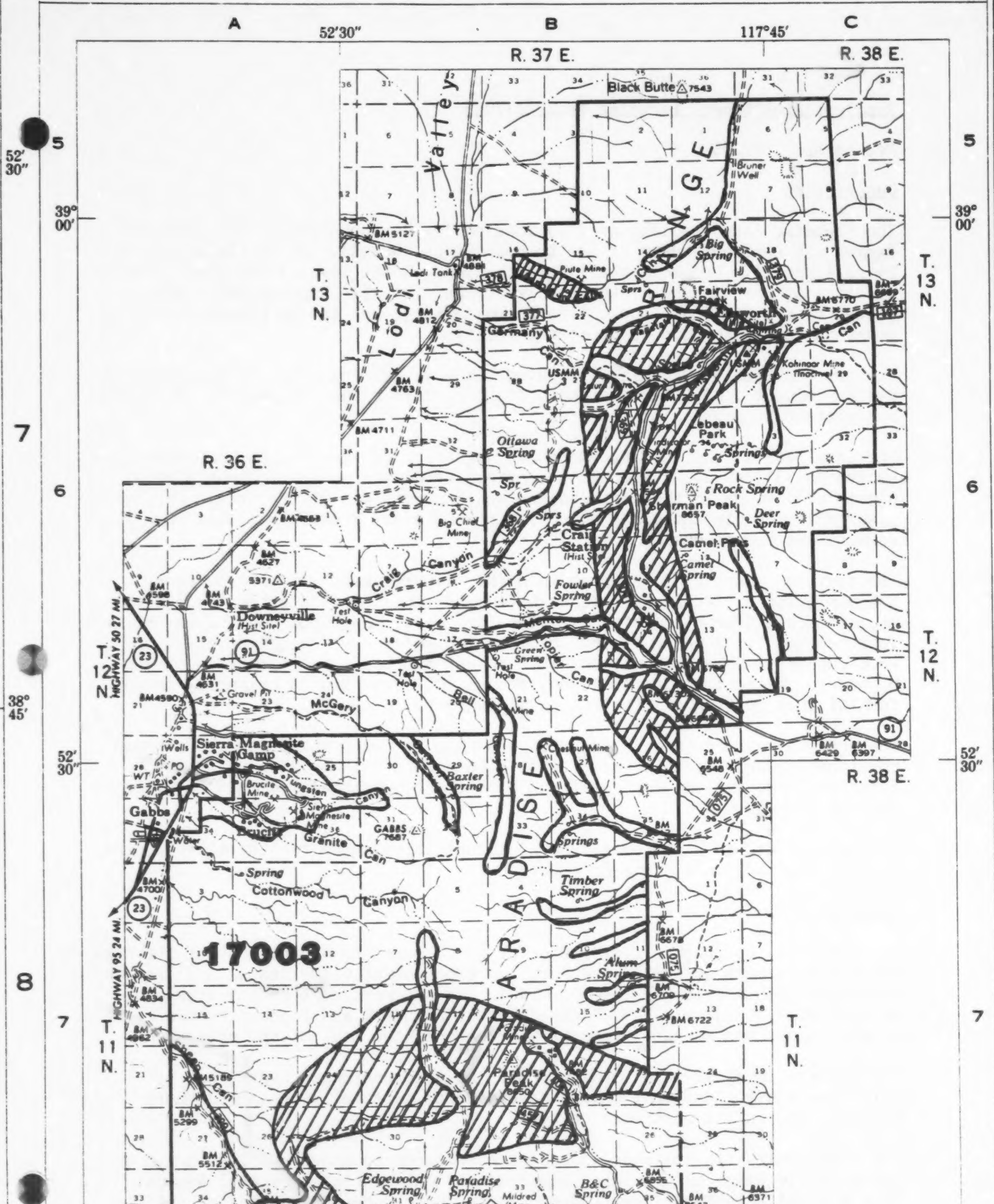
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Sherman Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	7.9	0	7.9
Integrity/ Naturalness (Int./Nat.)	Wildlife hab. impr. & wood products scheduled. Int./Nat. will remain low.	Same as Alternative A ------------------------->					No change. Int./Nat. will remain low	Same as Alt. A	Same as Alt. F
Solitude	No change. Oppor. for solitude will remain low.	Same as Alternative A ------------------------->					Mining restriction will increase solitude to low/mod.	Same as Alt. A	Same as Alt. F
Primitive Recreation	No Change. Opportunity for primitive recreation will remain low.	Same as Alterantive A ------------------------->							
Challenging Experience	Limited opportunity	Same as Alternative A ------------------------->							
Special Features	Not represented	Same as Alternative A ------------------------->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 110 acres of wildlife habitat improvement and 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.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Lodi Valley
Paradise Range
Big Spring
Fairview Peak
Bruner Well
Piute Mine
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Ottawa Spring
Lebeau Park
Rock Spring
Sherman Peak 8657
Deer Spring
Camel Spring
Big Chief Mine
Craig Station (Hist Site)
Craig Canyon
Fowler Spring
Downeyville (Hist Site)
Green Spring
McGery
Kohinoor Mine
Sierra Magnesite Camp
Gabbs
Brucite
Brucite Mine
Baxter Spring
Granite Can
Gabbs 7687
Cottonwood Canyon
Timber Spring
Alum Spring
Paradise Peak 8650
Edgewood Spring
Paradise Spring
Mildred Mine
B&C Spring
Sunnyside Mine
Davis Mine
Ford Wells
Highway 50 27 mi.
Highway 95 24 mi.
23
91
361
376
377

Roadless Area Name: Paradise Peak, #17003

Net Acres: 22235

Description

The Paradise Peak roadless area is located in the south end of the Paradise Range just east and south of the town of Gabbs, Nevada. It is characterized by rolling hills and moderately steep canyons at the lower elevations. In the vicinity of Paradise Peak, the topography becomes steep and rugged. When viewed from a distance, the entire Paradise Range has the appearance of a mountain island surrounded by desert valleys.

The area is easily accessible by paved highways running near its northern and western boundaries. Improved and unimproved dirt roads run near the southern and eastern boundaries of the area.

The area lies within the Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem (3130-021). Vegetation consists of pinyon/juniper communities at higher elevations in the northern and western portions of the area. On the lower foothills in the eastern portion of the area, Wyoming Big Sagebrush communities become dominant.

The southern portion of the area is highly mineralized. At the southern boundary, approximately 4500 acres have been impacted with extensive mineral exploration and development activities (see map). Fuelwood cutting is another important activity where mineral exploration roads have opened up areas to wood cutters. Some woodcutting, 1000 acres, has occurred near the northern boundary. Recreation use is light, around 100 RVDs, and is primarily in the form of deer hunting and harvesting pinyon nuts in the fall.

The area is part of the grazing unit assigned to the Yomba Shoshone Tribe in the Ione Stewardship Management Plan. The entire unit is made up of the Paradise Range and the Ione Valley. Cattle are permitted from mid-November to the end of May.

The area is within a proposed supersonic operations area for the military and is subjected to sonic booms on occasion.

Capability

There are no topographic features or physical barriers around most of the area to provide a more definable boundary for a potential wilderness. A livestock management fence south of the highway in the northern edge of the area could be used as a boundary. The unfenced Forest boundary and road corridors might create wilderness manageability problems around the rest of the area.

The natural integrity and appearance of the area has been compromised by extensive mineral exploration and development, especially on the southern boundary and in the northwest corner.

The opportunity for solitude is moderate compared to other roadless areas on the Paradise Range but low when compared to most places in central Nevada. Size and the relatively fewer "jeep" roads in the area helps improve the solitude characteristics of this area.

Opportunities for primitive recreation and challenging experiences are limited. Water and trails are the limiting factors.

There are no known threatened/endangered or sensitive species, nor are there any known special features of scientific interest in the area.

Availability

Recreation use is limited, focusing primarily upon prospecting, cordwood cutting, pinyon nut picking and fall hunting.

Prehistoric sites have been recorded but not fully evaluated. Archaeologaical sensitivity is expected to be moderate based on comparisons with adjacent areas of known sensitivity.

Wildlife populations are low and not particularly varied because of a lack of habitat diversity and water. Opportunities exist to improve wildlife habitat through manipulation of the pinyon-juniper stands and development of water.

Opportunities exist to intensify management of pinyon-juniper communities through the harvesting of fuelwood, Christmas trees, juniper posts, and pinyon nuts.

Water is limited to several seeps and springs located primarily near the eastern boundary of the area. Some of these have been developed for livestock use. There are few opportunities to increase water within the area.

A limited amount of forage is utilized by winter and spring cattle grazing. Forage production is relatively low due to shallow soils and limited precipitation. Potential for increased production is low. This area is used by 1000 head of cattle along with the rest of the Paradise Range and the Ione Valley as part of the Ione Stewardship Management Plan.

The entire area is highly mineralized as evidenced by the number of mining claims and exploration activities.

Active mining operations are adjacent to the area on two sides. Air quality can be degraded in the northwest corner of the area at times because of the mill located just outside of Gabbs.

Historical occurrence of fire has been low although the potential for a large brush fire exists, no major fires have occurred recently. The majority of fires has been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing Wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a Wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVDs per year and the Hoover Wilderness has 72,000 RVDs of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Paradise Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							22.2		22.2
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		22.2						22.2	
Stewardship Wildlife, Range & Dispersed Rec.	22.2		22.2	22.2	22.2	22.2			
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Paradise Peak*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	2	2	2	2	2	0	2	0
Livestock Grazing	AUM	387	387	387	387	387	387	387	387	387
Dispersed Recreation	MRVD	1.4	1.1	1.4	1.4	1.1	1.1	1.1	1.1	1.1
Wildlife	MWFUD	.3	.3	.3	.3	.2	.3	.3	.3	.3
Wildlife Habitat Improvement	Acres	214	31	172	214	214	31	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

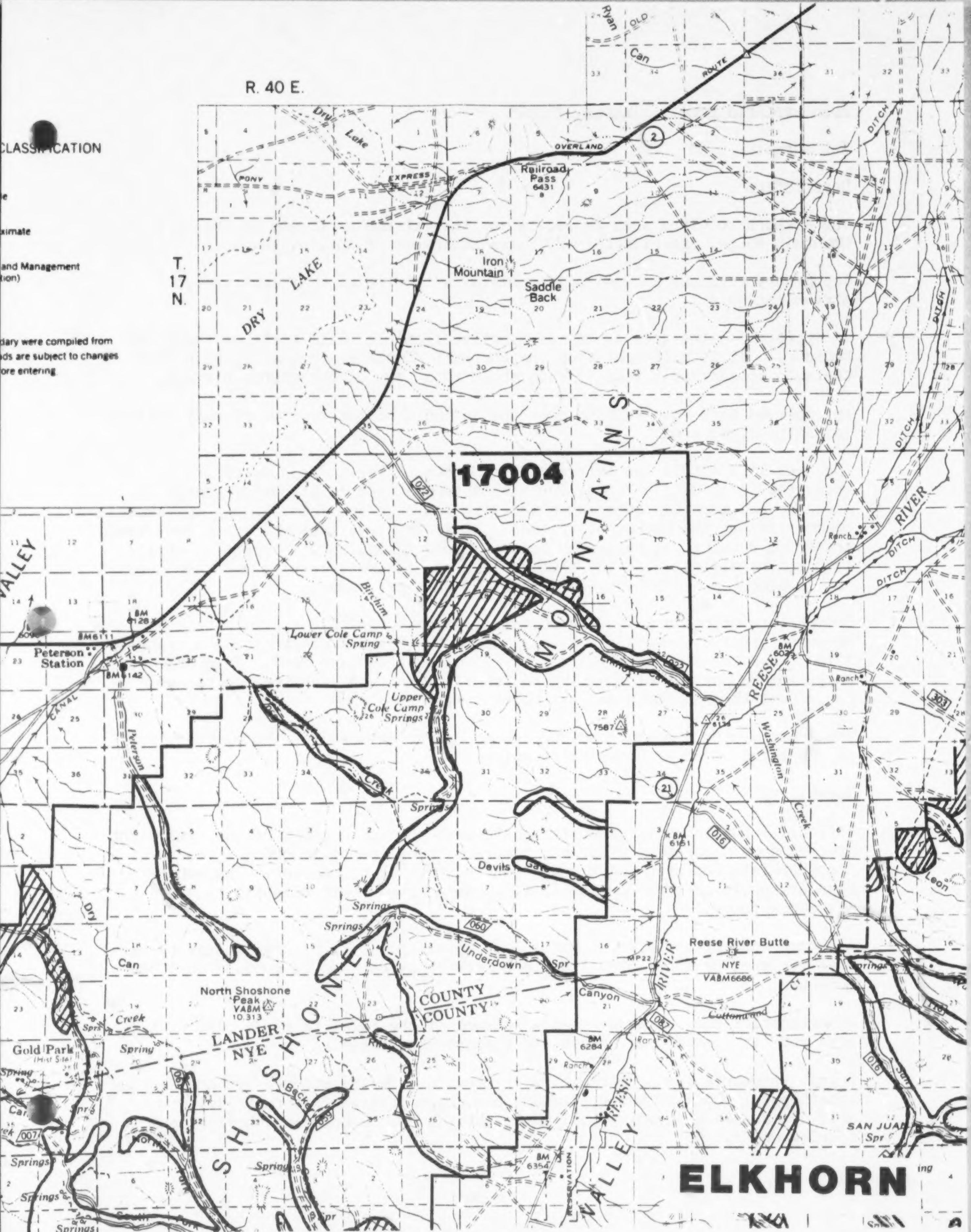
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Paradise Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	22.2	0	22.2
Integrity/ Naturalness (Int./Nat.)	Mining Wildlife hab. impr. & wood products Int./Nat. will remain low very low	Same as Alternative A ------------------------------>					Reduced mining Int./Nat. will be low/mod.	Same Alt. A	Same as Alt. F
Solitude	No change. Oppor. for solitude will remain low.	Same as Alternative A ------------------------------>					Mining restrictions will increase oppor. for solitude to low/mod.	Same as Alt. A	Same as Alt. F
Primitive Recreation	No Change. Opportunity for primitive recreation will remain low.	Same as Alternative A -->							
Challenging Experience	Limited opportunity	Same as Alternative A -->							
Special Features	Not represented	Same as Alternative A -->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 310 acres of wildlife habitat improvement and 20 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.

CLASSIFICATION
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SHOSHONE MOUNTAINS
VALLEY
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BM 6111
BM 6142
CANAL
Peterson
Birchim
Lower Cole Camp Spring
Upper Cole Camp Springs
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Creek
Springs
Devils Gate Can
Underdown Spr
North Shoshone Peak VABM 10,313
LANDER COUNTY
NYE COUNTY
Gold Park (Hist Site)
Spring
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Can
Becker
Reese River Butte
NYE VABM 6686
Canyon
REESE RIVER
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Roadless Area Name: Elkhorn, #17004

Net Acres: 6555

Description

The Elkhorn roadless area is located on the extreme north end of the Shoshone Mountain Range, approximately 20 miles southwest of Austin, Nevada.

Topography consists of low rolling hills, with a network of intermittent stream channels.

In appearance, the area is not distinctive from the hills north of the Forest boundary. It is different from the Shoshone Mountains to the south in that there is considerably less vegetation on this part of the mountain range.

An improved dirt road running near the southern boundary provides easy access to the roadless area.

The area lies within the Intermountain Sagebrush/Great Basin Sagebrush ecosystem (3130-032). Vegetation varies from scattered stands of pinyon juniper, and mountain mahogany mixed with low sage and mountain big sagebrush communities at the higher elevations. At lower elevations there are very few trees and Wyoming big sagebrush becomes the dominant shrub. There is very little mineralization in the area. Likewise, fuelwood cutting and recreation use is almost non-existent, less than 100 RVDs per year.

Primary use of the area is for summer livestock grazing. Approximately 350 acres of crested wheat grass seeding along the Elkhorn Canyon road is visually evident and has been deleted from the roadless area (see map). This area is only a minor portion of the Elkhorn C&H allotment. A livestock management fence runs through the area just north of the seeding.

The area is within a proposed supersonic operating area for the military and is subjected to sonic booms on occasion.

Capability

Unfenced Forest boundaries on the east, west and north sides of the area might present some management problems; however, there are no important topographical features which would better serve as boundaries. The southern boundary would be more manageable if it were moved north slightly to the livestock fence.

Although most of the area is natural in appearance, its natural integrity has been violated by mans activities to a certain extent and is considered to be moderate.

Opportunities for solitude are low because of the relative small size of the area and its limited vegetative and topographic screening.

Primitive recreation opportunities are low, as are the chances for challenging experiences. Lack of water, trails, and rugged terrain severely limit activities such as camping, all water activities, backpacking, hiking, ski touring and riding.

There are no known threatened/endangered species, nor are there any known special features.

Availability

Recreation use is primarily limited to the fall hunting seasons and occasional visits by prospectors and rockhounds. Due to the low use occurring in the Elkhorn roadless area, it is believed the area could support additional dispersed recreation use; however, the area lacks a variety of experiences to attract visitors.

Although virtually no archaeological investigation has been conducted, the environment is similar to the pinyon-juniper/sagebrush ecotone in other areas where prehistoric cultural resource sensitivity is known to be moderate to high. It is likely that at least resource procurement sites with moderately dense artifact assemblages occur in this unit. Currently the significance of such sites is unevaluated.

Wildlife is generally scarce and limited in variety; however the area does provide an important wintering range for mule deer. With the lack of water resource potential for improving wildlife habitat is poor.

There is limited timber resource in the area, and potential for development of the resource is minimal.

There are no known water sources in the area.

Cattle use the area to a limited extent for summer grazing. Little use is made of the area to the north of the fence. Forage production is low in that area due to shallow soils and limited precipitation. Potential for increasing production is low and would not be cost efficient because the scarcity of water would preclude cattle from using the area to any great extent.

Evidence of mineralization in the area is slight, and there is probably low potential of future mining activities.

Historical occurrence of fire has been low although the potential for large brush fires exists, no major fires have occurred recently. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a Wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVDs per year and the Hoover Wilderness has 72,000 RVDs of use.

The nearest population centers are the Reno/Carson City, Nevada, areas 150 miles west and the Las Vegas, Nevada, area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Elkhorn

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							6.6		6.6
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		6.6	6.6	6.6		6.6		6.6	
Stewardship Wildlife, Range & Dispersed Rec.	6.6				6.6				
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Elkhorn*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	235	235	235	235	235	235	235	235	235
Dispersed Recreation	MRVD	.4	.4	.4	.4	.3	.4	.4	.4	.4
Wildlife	MWFUD	.2	.4	.4	.4	.2	.2	.4	.4	.4
Wildlife Habitat Improvement	Acres	0	6	6	6	0	0	0	6	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

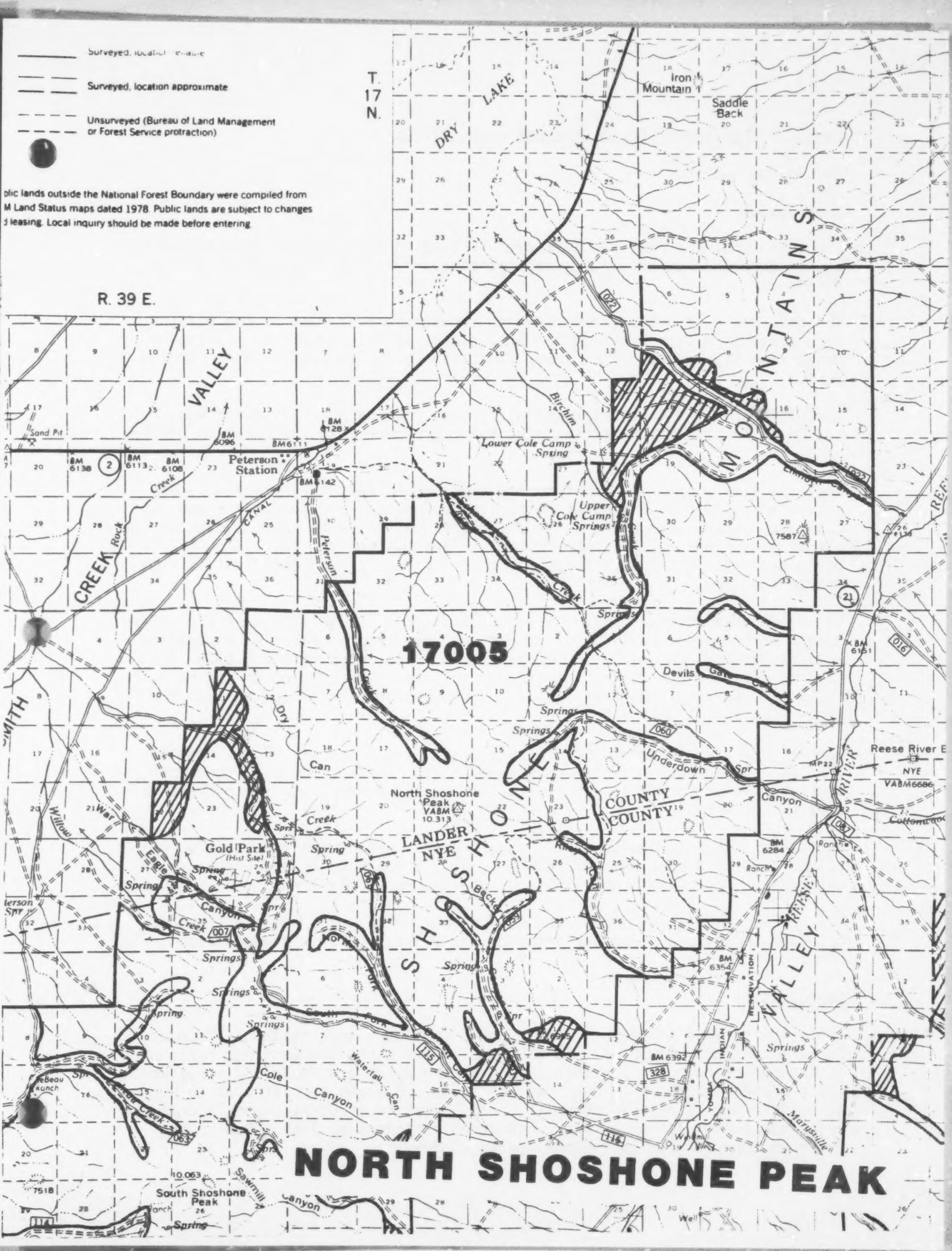
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Elkhorn

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1990 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	0.6	0	6.0
Integrity/ Naturalness (Int./Nat.)	Wood products scheduled Int./ Nat. will remain mod.	Wildlife habitat improvement & wood products Int./ Nat. low.	Same as Alt. B	Same as Alt. B	Same as Alt. A	------------>	No change. Int./Nat. will remain moderate.	Same as Alt. F	Same as Alt. F
Solitude	No change. Oppor. for solitude will remain low.	Same as Alternative A	------------	------------	------------	------------	------------	------------	------------>
Primitive Recreation	No Change. Opportunity for primitive recreation will remain low.	Same as Alternative A	------------	------------	------------	------------	------------	------------	------------>
Challenging Experience	Limited opportunity	Same as Alternative A	------------	------------	------------	------------	------------	------------	------------>
Special Features	Not represented	Same as Alternative A	------------	------------	------------	------------	------------	------------	------------>

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



NORTH SHOSHONE PEAK

Roadless Area Name: North Shoshone Peak, #17005

Net Acres: 37480

Description

The North Shoshone Peak roadless area is located in the north central portion of the Shoshone Mountain Range, approximately 30 miles southwest of Austin, Nevada.

The area has a continuous tree covered appearance over most of the mid and high elevations with sagebrush covered slopes in the foothills. Elevations range from 7,500 feet in the lower foothills to 10,300 feet on North Shoshone Peak.

Access to the area is by improved dirt roads running near its north and east boundries. Numerous unimproved dirt roads protrude into the interior of the area.

The area lies within the Intermountain Sagebrush/Juniper Pinyon Woodlands ecosystem (3130-032). Vegetation varies from closed pinyon/Juniper and mountain mahogany stands broken up by occasional low sage brush ridges at the higher elevations to sagebrush covered valley bottoms and foothills. Occasional stands of aspen occur along portions of the intermittent streams within the area.

The area has a moderate level of mineralization. Evidence of past mining and mineral exploration activity is common, as seen by the number of mining and milling exploration scars. Numerous "jeep" roads occur throughout the area. Limited fuelwood cutting by commercial cordwood cutters is occurring near the western boundary of the area and along the road corridors leading into the area.

The area is part of three summer cattle grazing allotments. Three crested wheatgrass seedings, approximately 2,300 acres in size, occur in the north, south, and west portions of the area (see map). A small wild horse herd uses part of the area.

Recreation use is moderate, for central Nevada, with primary activities being upland game bird hunting, deer hunting, pinyon nut picking and berry gathering. An estimated 500 RVD's of use occurs in the area.

Low flying jet aircraft cross the area sporadically. The area is within a proposed supersonic operating area for the military and is subjected to sonic booms on occasion.

Capability

There are no good topographic features to provide a more definable boundary for a potential wilderness. An allotment fence along the west and north sides of the Forest boundary provides a physical boundary and could aid management. The remainder of the area has numerous roads and might be difficult to manage as wilderness. The many intrusive roads, create a grouping of small unroaded areas attached together by narrow unroaded stringers of land. Due to the numerous inharmonious intrusions, particularly relating to mining activities around Gold Park at the southern end of the area, wilderness values of natural integrity and appearance are below average.

Opportunities for solitude are good because of the large size of the area and the relative lack of human activity during most of the year.

Primitive recreation opportunities are limited because there are no established recreation trails within the area, but water is relatively abundant from numerous springs throughout the area. Opportunities for challenging experiences are limited.

There are no known threatened/endangered species.

Availability

Recreation use is primarily limited to the fall for hunting, pinyon nut picking, and berry gathering. Opportunities to increase developed recreation are minimal, but some dispersed recreation development potential exists.

Wildlife populations are above average for central Nevada due to good water distribution. Habitat is slightly more diverse but no significant or unusual species are known to occur in the area. Opportunities to improve wildlife habitat are limited to opening up Pinyon/Juniper stands at lower elevations to stimulate forage production for wintering mule deer.

Potential exists to develop the areas' timber resources through fuelwood harvest, commercial Christmas trees, juniper posts and pinyon nuts.

Water is fairly well distributed throughout the area. There are limited opportunities to increase water supplies.

The area is grazed by cattle for a three and a half month period each summer. Parts of three grazing allotments are involved with this area and production is at moderate levels and there do not appear to be overstocking problems at the present time. Potential for improving production is limited to prescribed burning. Sufficient forage is available to support the wild horse populations currently occupying the area. Several fences and water developments are located within the area.

The area around Gold Park, approximately 6,500 acres, is highly mineralized given the number of mining claims and amount of exploration activity occurring within the area.

The area associated with Gold Park is of possible historical interest. Prehistorically, extensive lithic scatters and rock ring complexes are known to exist throughout the area, particularly along the lower drainage systems. Currently, the significance of these sites is unevaluated.

Historical occurrence of fire has been low although the potential for large brush fires exists, no major fires have occurred recently. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVDs per year and the Hoover Wilderness has 72,000 RVDs of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: North Shoshone Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							37.5		37.5
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		37.5	37.5			37.5		37.5	
Stewardship Wildlife, Range & Dispersed Rec.	37.5				37.5				
Market Opportunities (Timber and/or Grazing)				37.5					
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: North Shoshone Peak*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	4	4	4	6	4	4	0	4	0
Livestock Grazing	AUM	2285	2285	2285	2437	2285	2285	2285	2285	2285
Dispersed Recreation	MRVD	2.4	2.4	2.4	1.7	1.9	2.4	2.4	2.4	2.4
Wildlife	MWFUD	.5	1.2	1.2	.5	.5	.5	1.2	1.2	1.2
Wildlife Habitat Improvement	Acres	0	22	22	0	0	0	0	22	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

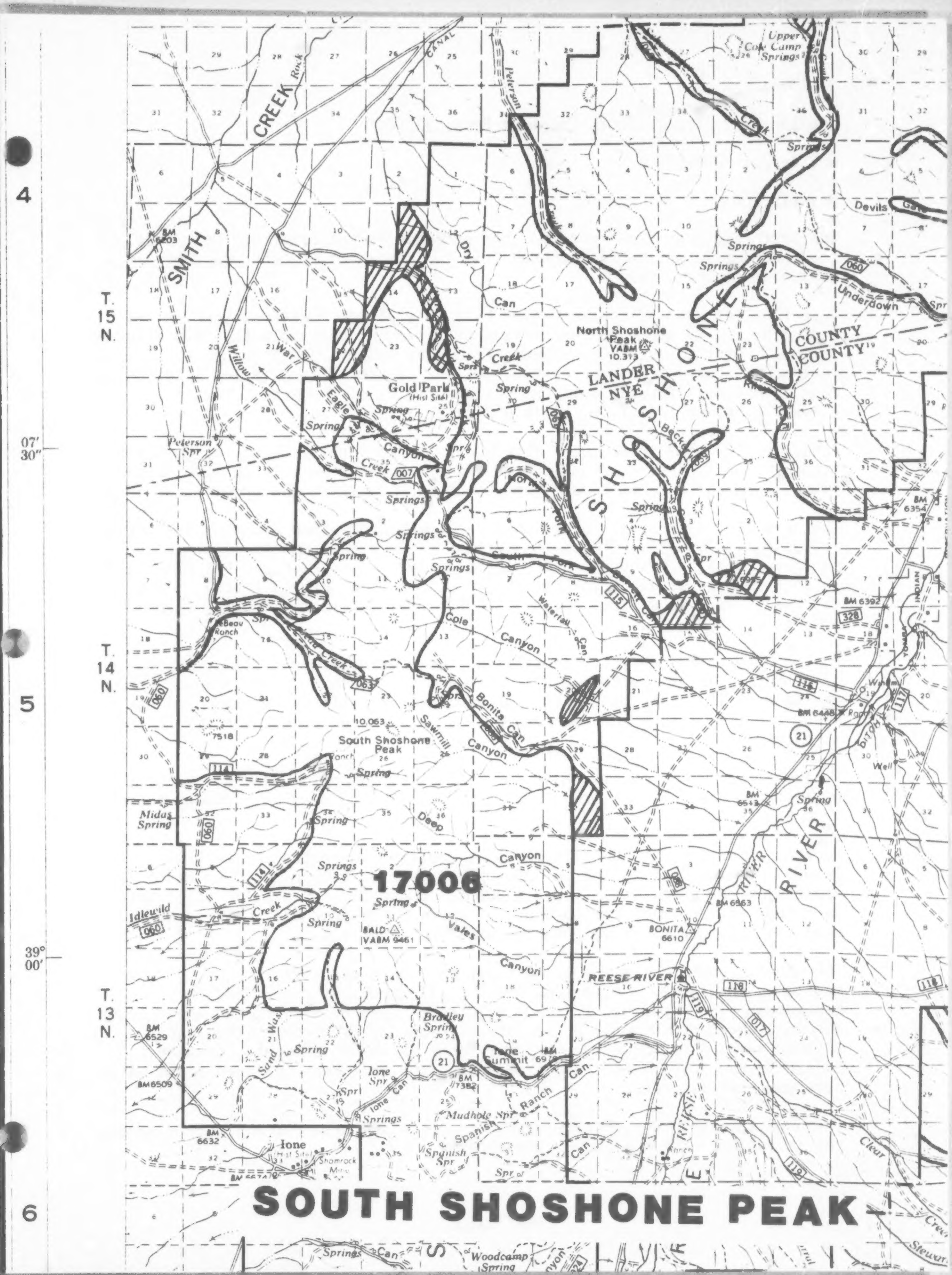
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: North Shoshone Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	37.5	0	37.5
Integrity/ Naturalness (Int./Nat.)	Mining & wood products scheduled Int./ Nat. will remain low	Mining wildlife hab. impr. & wood products Int./ Nat. very low	Same as Alt. B	Same as Alt. A ------------------------------>			Reduced mining. Int./ Nat. will be low/mod.	Same as Alt. F	Same as Alt. F
Solitude	No change. Oppor. for solitude will remain low/ moderate	Same as Alternative A ------------------------------>					Oppor. for Solitude will increase to mod/high w/mining restrictions	Same as Alt. A	Same as Alt. F
Primitive Recreation	No Change. Opportunity for primitive recreation will remain low.	Same as Alternative A ------------------------------>							
Challenging Experience	Limited opportunity	Same as Alternative A ------------------------------>							
Special Features	Not represented	Same as Alternative A ------------------------------>							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 40 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



SOUTH SHOSHONE PEAK

Roadless Area Name: South Shoshone Peak, #17006

Net Acres: 24825

Description

The South Shoshone Peak roadless area encompasses the crest and both sides of the Shoshone Range, and is located from two to ten miles north of the community of Ione, Nevada.

This roadless area is characterized by fairly steep, rugged canyons on the east side of the mountains and more gently sloping terrain with broad alluvial foothills on the west side. Viewed from Ione Valley, the area has a continuous tree covered appearance, while from Reese River Valley interesting rock formations visually break up the continuity of the tree cover. Elevations range from 7,000 to 10,063 feet.

Access to the area is from an improved dirt road running along the southern boundary and from several unimproved roads along the western portion of the area. Numerous sub-standard "jeep" roads also traverse the area.

The area lies within the Intermountain Sagebrush/Mountain Mahogany Oak Scrub ecosystem (3130-031). Vegetation varies from dense stands of mountain mahogany at higher elevations to pinyon juniper communities on the mid-slopes, to sagebrush grass sites in the valley bottoms and foothill areas. Small patches of aspen and riparian shrubs occur near intermittent streams and springs.

Most of the area is highly mineralized. Considerable exploration, mining, and milling activities are taking place between the areas southern boundary and the town of Ione (see map). This area of mining activity is approximately 4,000 acres in size. Numerous other claims have been staked throughout the roadless area.

Fuelwood cutting is an important local activity occurring near the western edge of the area. These areas are mainly used by commercial cordwood cutters from the Fallon area.

Recreation use, about 500 RVDs, is of a moderate intensity for central Nevada. Primary activities include upland game bird hunting, deer hunting, and pinyon nut gathering. The Boy Scouts of America own a piece of private land near, but outside the southwest corner of the area and some use of the roadless area occurs in conjunction with their activities.

The area is part of three grazing allotments used by cattle for up to four months in the summer. Livestock use the allotments as prescribed by management plans approved for each allotment. There is a crested wheat grass seeding, about 300 acres, on the eastern boundary of the area (see map). Another seeding was planned for the Wyoming sagebrush community between Sunnyside and Idlewild Creek but was never put in. Numerous fences and water developments also occur.

The area is within a proposed supersonic operating area for military aircraft and is subject to sonic booms on occasion.

Capability

No topographic features exist to provide a more definable boundary for a potential wilderness. Forest boundary fences along the eastern boundary and along the northern portion of the western boundary provide physical boundaries to aid management. Numerous road corridors might create manageability problems.

Natural integrity and appearance of the South Shoshone Peak Area has been seriously compromised by past and present mining activity, primitive vehicle trails, water developments and fences.

Opportunities for solitude are moderate to low in this area, primarily because of intense mining activity. The steeper more rugged canyons on the east side are more conduxive to solitude than the areas on the west side.

Primitive recreation opportunities are limited in the area. Water is fairly well distributed but can be scarce in lower regions in the western portion of the area. There is a lack of trails other than "jeep" or cattle trails in the area. There are few opportunities for challenging experiences.

There are no known threatened/endangered species, nor are there any known special features.

Availability

Recreation use occurs mainly during the fall period and is limited to hunting and pinyon nut picking. Few opportunities exist to increase either developed or dispersed recreation.

Wildlife populations are at moderate levels for the central Nevada area. Habitat is moderately diverse. No unusual species are known to occur within the area. Pinyon/juniper stands can be opened up at lower elevations to provide a better forage base for wintering mule deer.

The timber resource could be managed more intensively. Increased levels of fuelwood harvesting, Christmas trees, and juniper posts could be sustained with better management. Pinyon nut harvests at the commerical level would continue to occur sporadically even with increased levels of timber management.

There is little potential for developing additional water supplies. Water is presently distributed fairly well over most of the area.

Cattle graze the area for up to four months each summer. Forage production is at moderate levels and livestock overstocking does not appear to be a problem. Potential for increasing forage is fairly good due to the suitability of sagebrush communities in the west side for plowing and seeding. Higher elevation canyon bottoms and basins are suitable for burning. Several fences and water developments for livestock are located in this area. Some of the water developments need to be reconstructed to be functional.

The area contains numerous mining claims and has considerable evidence of past and present mining and milling activities. Several miles of primitive "jeep" trails are associated with the mining activities.

Even though limited archaeological survey has been conducted in the area, the work that has been done indicates that extensive lithic scatters and rock ring complexes could exist throughout the area. A large prehistoric basalt quarry is known to be in the unit.

Historical occurrence of fire has been low although the potential for large brush fires exists, no major fires have occurred recently. The majority of fires has been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale. All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a Wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVDs per year and the Hoover Wilderness has 72,000 RVDs of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: South Shoshone Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							24.8		24.8
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		24.8	24.8			24.8			
Stewardship Wildlife, Range & Dispersed Rec.	24.8				24.8				
Market Opportunities (Timber and/or Grazing)				24.8				24.8	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: South Shoshone Peak*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	2	2	3	2	2	0	3	0
Livestock Grazing	AUM	1599	1599	1599	1804	1599	1599	1599	1804	1599
Dispersed Recreation	MRVD	1.6	2.5	2.5	1.1	1.2	1.2	2.5	1.1	2.5
Wildlife	MWFUD	.2	.7	.7	.2	.2	.2	.7	.2	.7
Wildlife Habitat Improvement	Acres	114	19	385	0	114	114	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

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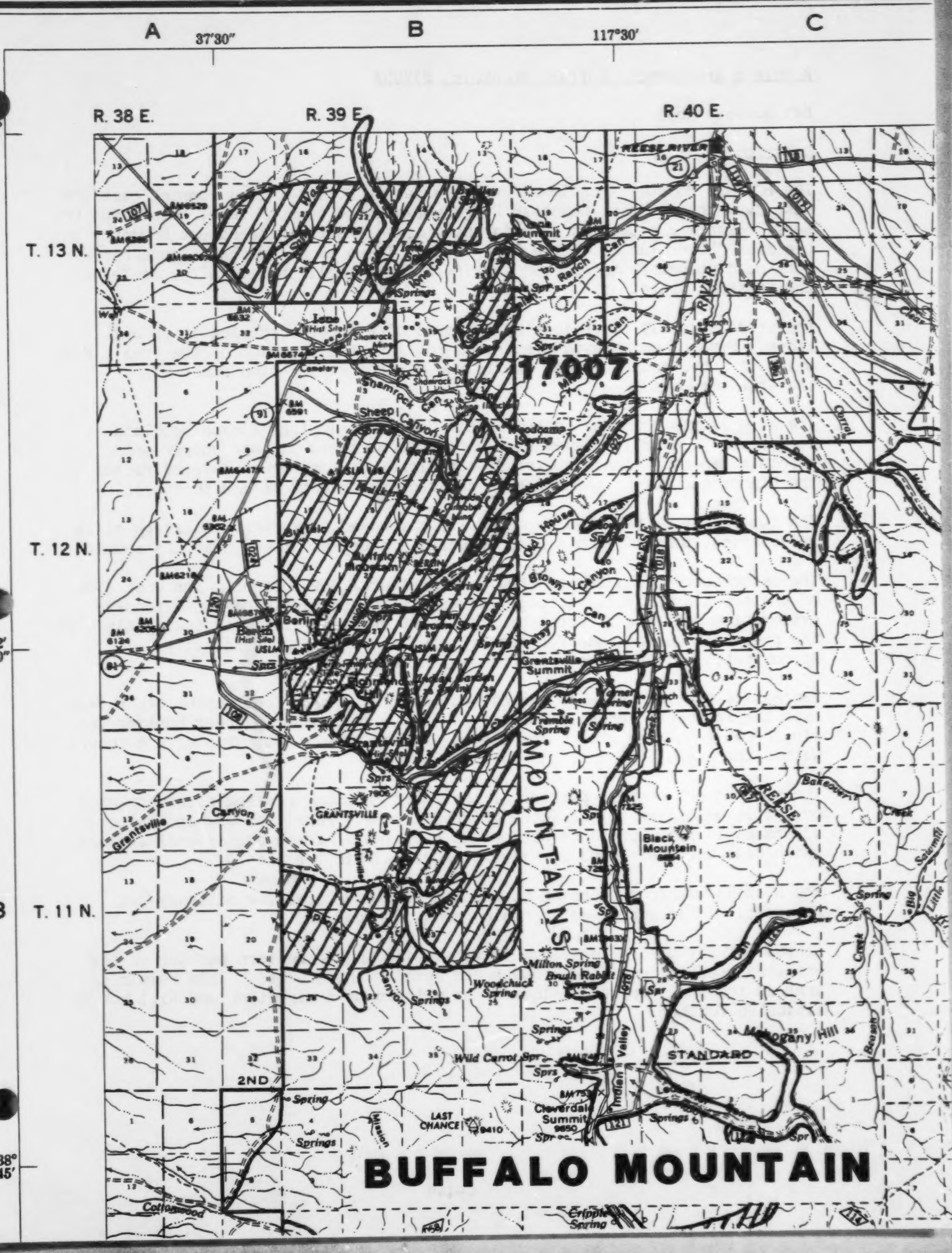
Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: South Shoshone Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	24.8	0	24.8
Integrity/ Naturalness (Int./Nat.)	Mining wildlife hab. impr. & wood products Int./ Nat. very low	Same as Alt. A	--------------->	Mining & wood products Int./ Nat. very low	Same as Alt. A	----------->	Reduced mining Int./Nat. will be low	Same as Alt. D	Same as Alt. F
Solitude	No change. Oppor. for solitude will remain low.	Same as Alternative A		-----------	-----------	----------->	ORV restriction will increase oppr. for solitude to moderate	Same as Alt. A	Same as Alt. F
Primitive Recreation	No Change. Opportunity for primitive recreation will remain low.	Same as Alternative A		-----------	-----------	-----------	-----------	-----------	----------->
Challenging Experience	Limited opportunity	Same as Alternative A		-----------	-----------	-----------	-----------	-----------	----------->
Special Features	Not represented	Same as Alternative A		-----------	-----------	-----------	-----------	-----------	----------->

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 1140 acres of wildlife habitat improvement and 20 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



BUFFALO MOUNTAIN

Roadless Area Name: Buffalo Mountain, #17007

Net Acres: 3635

Description

The Buffalo Mountain roadless area is a narrow strip of land running east and west over the Shoshone Mountain Range between the town of Ione, Nevada and the Berlin Historic site. It extends about six miles from the Forest Boundary in the Reese River Valley to the Ione Valley. The area is common in appearance with no distinct features, and is a relatively small parcel in the center of the Shoshone Range.

The area is easily accessible by improved dirt roads bordering it on all sides. Several unimproved dirt roads run into the interior of the area. Many miles of sub-standard "jeep" trails and mineral exploration roads also traverse the area.

The area lies within the Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem (3130-021). Vegetation varies from closed pinyon/juniper and mountain mahogany stands broken by occasional low sagebrush covered ridges at the higher elevations to sagebrush covered canyon bottoms and foothills.

The topography of the area is generally comprised of moderate to steep hills and canyons, Buffalo Mountain is especially steep and rocky near its summit.

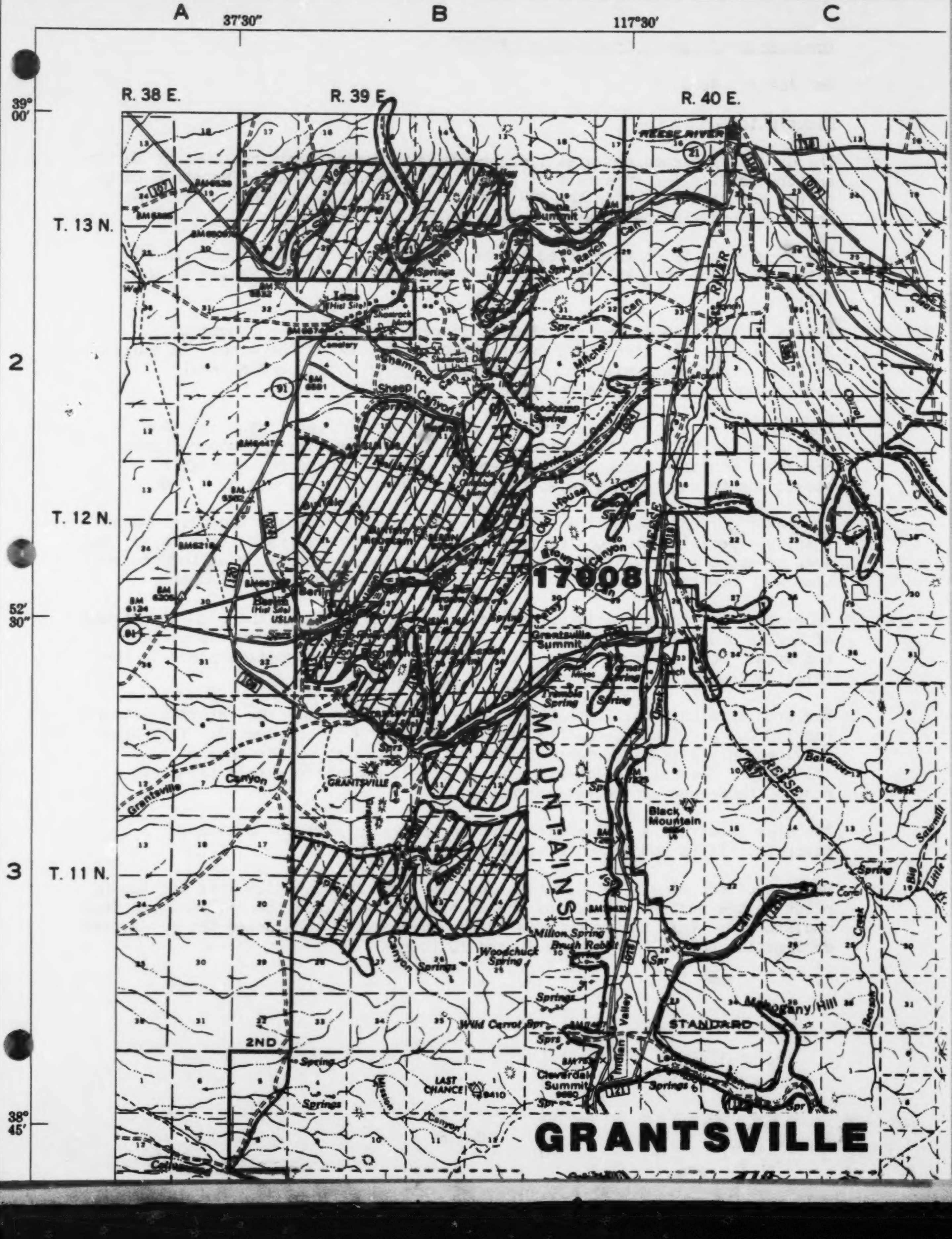
The major current use of the area is for mineral development. The west side of the mountin range is virtually covered with mining claims and extensive exploration activites. Development of most of these claims is taking place at the present time (see map for approximate boundary of this activity). Approximately 7,000 acres are included in this area.

Recreation use is generally associated with the Berlin/Ichthyosaur State Park near the southwest corner of the area. A limited amount of deer hunting and pinyon nut gathering also takes place. Approximately 100 RVD's of use occurs within the area.

The area covers a small portion of the South Shoshone grazing allotment used by cattle belonging to the Yomba Shoshone Tribe. Permitted use on the entire allotment is from June 1 to October 20 each year. There are several springs which have been developed for livestock use within the area.

The area is within a proposed supersonic operating area for military jet aircraft. It is subjected to sonic booms on occasion.

Because of the mineral development activities in the western portion of the area, an area of less than 5,000 acres remains undisturbed. This remaining area is too small to be considered for wilderness designation and will not be evaluated further.



GRANTSVILLE

Roadless Area Name: Grantsville, #17008

Net Acres: 4260

Description

The Grantsville roadless area lies between the historic mining towns of Berlin and Grantsville and runs east of these towns over the Shoshone Mountain Range to the Forest Boundary in the Reese River Valley. The area has no distinct features, and represents a minor part of the Shoshone Range.

The topography is characterized by small broken canyons and ridges, which extend into the Ione Valley on the west and the Reese River Valley to the east.

Access to the area is unrestricted as improved dirt roads surround it. Several unimproved dirt roads penetrate the interior of the area. In addition to these roads, many miles of sub-standard "jeep" trails and mineral exploration roads traverse the area.

The area lies within the Intermountain Sagebrush/Juniper Pinyon Woodland Ecosystem (3130-021). Vegetation varies from closed pinyon/juniper stands broken by mountain mahogany and sagebrush covered ridges at the higher elevations to sagebrush covered canyon bottoms and foothills.

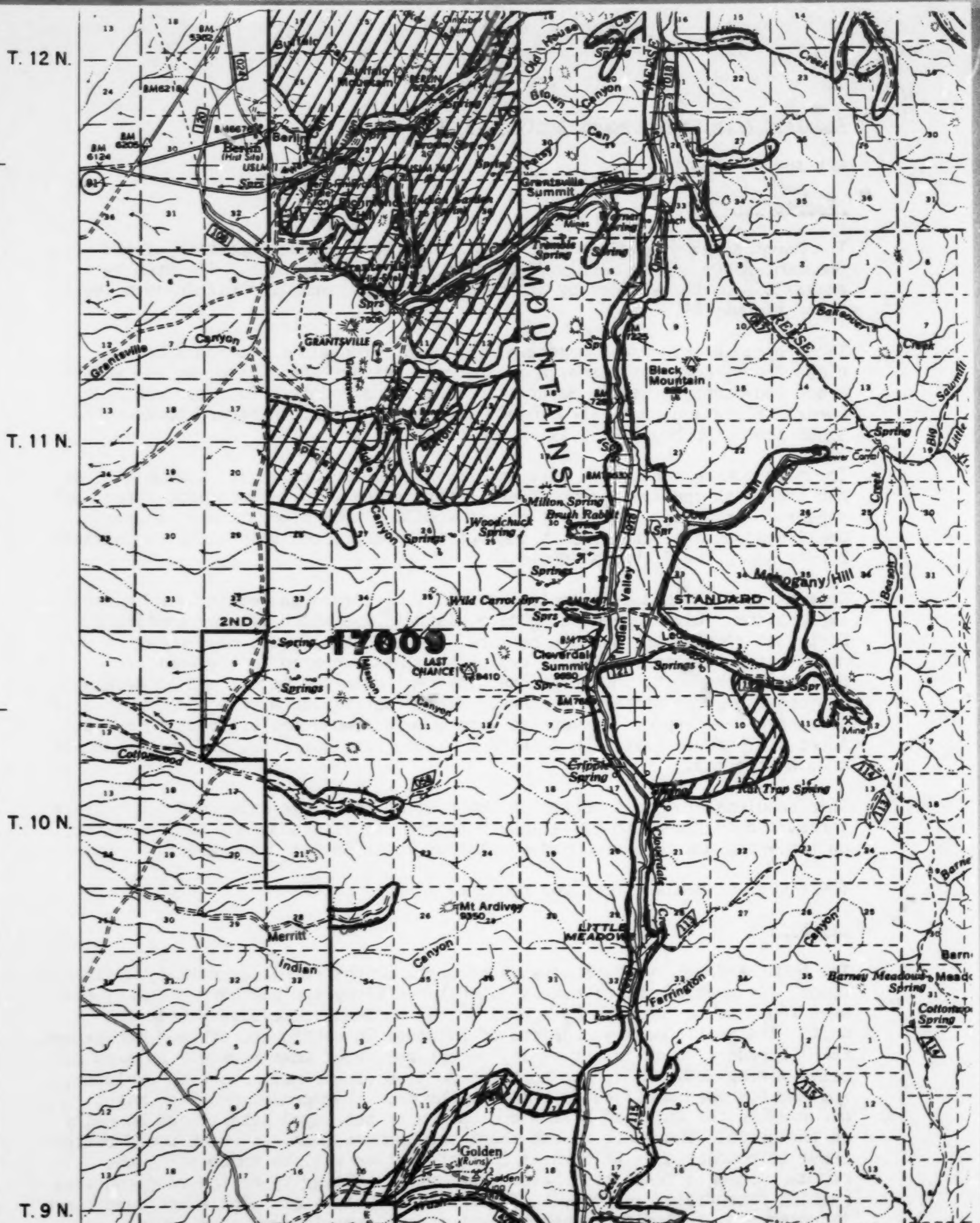
The major current use of the area is for mineral exploration and development. This is especially true on the west side of the mountain range (see map). An area of approximately 5,000 acres is being explored extnsively at the present time with new roads, drill pads, and trenches being constructed monthly.

Recreation use is generally associated with exploration of the old ghost towns of Berlin and Grantsville located near the northwest and southwest corners of the area. Some deer hunting and pinyon nut gathering also take place in the fall. Approximately 100 RVDs of use occurs in the area.

The area is within the South Shoshone grazing allotment. The entire allotment has 110,000 acres and permitted use is from June 1 to October 20. This area provides only a small portion of the grazing capacity of the entire allotment. Several old livestock water developments are within the area. Most of those need to be reconstructed.

The area is within a proposed supersonic operating area for military aircraft. It is subjected to sonic booms on occasion.

Because of the mineral exploration and development activities that are taking place in the western portion of the area, there are less than 5,000 acres left undisturbed. This remaining area is too small to be considered for wilderness designation and will not be evaluated further.



MOUNT ARDIVEY

Roadless Area Name: Mount Ardivey, #17009

Net Acres: 36875

Description

The Mount Ardivey roadless area lies in the very southern portion of the Shoshone Range approximately 70 miles northwest of Tonopah. The area is accessible on three sides by improved dirt roads, and lies within 10 miles of State Highway 89.

Topography in this area is generally rugged, with mid-elevation slopes dissected by numerous washes and canyons. Primary land types include Rugged Front and Mountain Lands, Mountain Uplands, and Mountain Buttress and Spur Lands. Elevations range from 6,600 feet along the southwestern boundary to 9,400 feet atop Mount Ardivey.

The most common vegetative type is pinyon-juniper woodlands. Communities of big sagebrush and low sagebrush are interspersed with the woodland types, and sagebrush is a major component of the woodland understory in many places. Small meadows are scattered throughout the area, especially along the eastern border along the Cloverdale road.

Current uses in this area include grazing, dispersed recreation, and mineral exploration. Livestock grazing is a historic use which will be continued. Dispersed recreation includes hunting, hiking, camping and many other primitive activities. Mineral exploration has occurred in the southern portion of the unit, in the Grantsville region in the north, and in several canyons along the western boundary. Mining activities around the Grantsville area have been especially intense with numerous road and exploration scars. About 5,375 acres have been deleted from the roadless area, see cross-hatched area on the map.

This roadless area is bordered on the east by the Cloverdale road and private lands, and on the south by definable roads. It lies adjacent to Ione Valley on the west, and is surrounded by similar lands on the other sides.

There are no special or unique features in this unit.

Capability

The Mount Ardivey roadless area is bordered on the east and south by definable roads. An area of approximately 3,000 acres along the southern boundary has been found to be isolated by a road and is no longer included within the unit. The west boundary consists of National Forest/Bureau of Land Management (BLM) boundary which is not easily recognized, even when marked. An area of heavy mining activity in the northern portion of the unit has been excluded, and the boundary modified as shown on the map. Management problems might occur along the unfenced NF/BLM boundaries or the legal description boundary on the north. There are no important topographic features which would better serve as boundaries. Wilderness characteristics will be enhanced by the boundary changes described above. The natural integrity of the roadless area remains essentially intact with few man-made facilities. There are some range improvements, including fences and water developments, and some cabins and other evidence associated with old mining operations. One Forest Service system trail connects the east and west boundaries, but it is not maintained except by livestock use. Other livestock trails exist throughout the unit.

The natural appearance of the unit is not greatly impacted by the improvements mentioned above except in very localized areas. Overall the area appears to be free of man's influences and activities.

Rugged terrain provdes excellent topgraphic screening. Vegetative screening is provided by the pinyon-juniper woodlands which are prevalent thoughout the area. The combination of these factors makes opportunities for solitude excellent within this unit.

Opportunities for primitive recreation include camping, backpacking, hiking, hunting, picnicking, birdwatching, horseback riding, rock hunting, photography and sightseeing. Many of these activities depend on trail access to the interior of the unit, which is limited in amount and quality. Also, the quality of these activities may be limited by the lack of potable water.

This roadless area provides the recreationist with the challenge of hiking or camping in a remote area. Trees provide some shelter from the elements, but climatic conditions at the higher elevations can be harsh and quite changeable at any time of the year. The rugged terrain offers opportunities for some difficult hikes. The recreationist should be prepared for complete self-sufficiency due to the area's lack of surface water and its remote nature.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, goshawk, sharp-shinned hawk, Coopers hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No threatened, endangered or sensitive plant species are known to occur here.

There are no known special features in this unit.

Availability

Many types of primitive recreation are available in the Mount Ardivey area. Hunting is probably the most popular sport, but other activities include hiking, horseback riding, camping, backpacking, rock hunting, picnicking, birdwatching, photography and sightseeing.

Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. There are no figures showing current recreational use of the Mount Ardivey area, but overall use is believed to be moderate at about 200 RVD's annually.

This area supports those wildlife species tied to the pinyon-juniper and sagebrush vegetative communities, including the sensitive species listed above.

This unit contains portions of two National Forest watersheds. No systematic survey of watershed conditions has been made, but overall conditions appear to be good. Surface water quality is impacted by livestock use. Distribution of water sources is fair, with most springs found in the northeastern portion of the unit. Small springs and wet meadows provide water in the interior, but generally this water is not of sufficient amount or quality for human use.

Mount Ardivey is included within three livestock allotments administered by the Forest Service. Cattle graze the area from June to October in the northern portion, and from November through June in the southern portion. Approximately 700 AUM's are grazed annually by one operator. The area has been grazed by livestock since at least 1890.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021) and contains primarily the juniper-pinyon woodland ecosystem type. Great Basin sagebrush ecosystems also occur here. Mountain mahogany may be found in some higher elevation areas. Riparian habitat is represented by seeps, springs and meadows and some stringers along Cloverdale Creek. Since riparian areas represent only .1% of all the lands in Nevada, maintenance of these areas is a priority and will continue to be.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area. No commercial cordwood cuts are anticipated for the future.

The Mount Ardivey area is comprised of tertiary volcanics, with welded tuffs and rhyolites common. There is moderate potential for gold and silver, both as disseminated and vein deposits. Some placer gold occurs. Mineral exploration is currently occurring in the Golden Wash area along the southern border, and the Grantsville area on the northern border.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

There is presently no burning plan for this area, and no fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

Although virtually no archaeological investigation has been conducted, the environment is similar to the pinyon-juniper/sagebrush ecotone in other areas where prehistoric cultural resource sensitivity is known to be moderate to high. It is likely that at least resource procurement sites with moderately dense artifact assemblages occur in this unit. Currently, the significance of such sites is unevaluated.

There are no privately-owned lands contained within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 250 miles N.E. of Mt. Ardivey. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the

Reno/Carson City area, about 250 miles to the northwest and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVDs per year and the Hoover Wilderness has 72,000 RVDs of use.

Little non-local support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Mount Ardivey roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects_of_Wilderness/Nonwilderness_Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Mount Ardivey

Management_Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			36.9	36.9			36.9	36.9	36.9
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		36.9				36.9			
Stewardship Wildlife, Range & Dispersed Rec.	36.9				36.9				
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Mt. Ardivey*

Management_Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	0	0	1	1	0	0	0
Livestock Grazing	AUM	1294	1294	1294	1294	1294	1294	1294	1294	1294
Dispersed Recreation	MRVD	4.3	8.6	8.6	8.6	3.4	8.6	8.6	8.6	8.6
Wildlife	MWFUD	2.0	5.1	5.1	5.1	2.0	5.1	5.1	5.1	5.1
Wildlife Habitat Improvement	Acres	162	41	0	0	162	41	0	0	0
Fuel Management	Acres	0	6	0	0	0	6	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

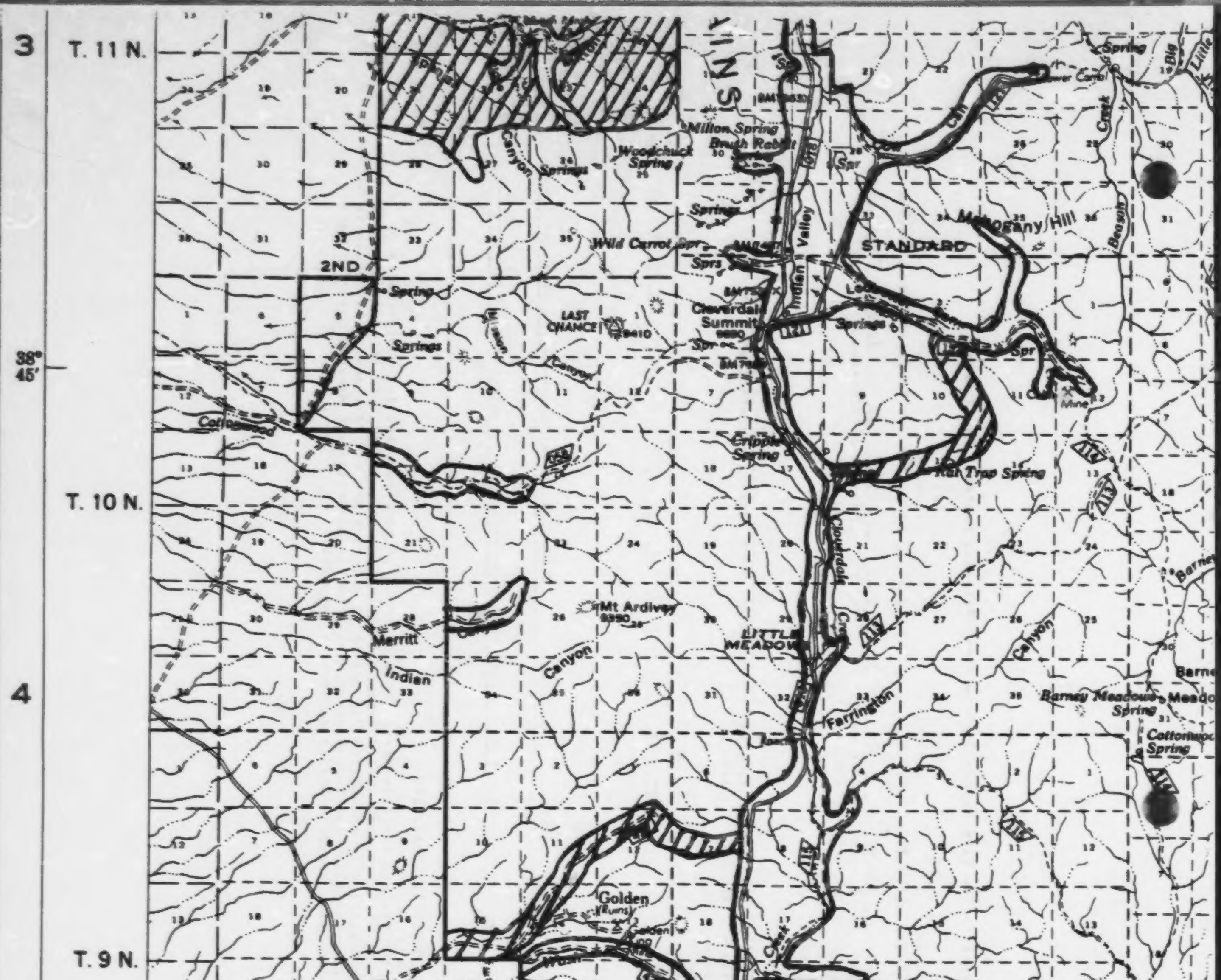
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Mount Ardivey

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	36.9	36.9	0	0	36.9	36.9	36.9
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife . hab. impr. & wood prod. Int./Nat. mod./high	Same as Alt. A	Reduced mining. Int./Nat. will be high	Same as Alt. C	Same as Alt. A	---------------->	Same as Alternative C	---------->	
Solitude	No change. Oppor. for solitude will remain mod./ high	Same as Alt. A	ORV restrictions increase oppor for solitude to high	Same as Alt. C	Same as Alt. A	---------------->	Same as Alternative C	---------->	
Primitive Recreation	No Change. Opportunity for primitive recreation will remain low.	Same as Alternative A	-->						
Challenging Experience	Low/mod. oppor. due to rugged terrain	Same as Alt. A	-->						
Special Features	Some sensitive wildlife species	Same as Alt. A	-->						

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 410 acres of wildlife habitat improvement and 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate/high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



STEVEN'S SPRINGS

Roadless Area Name: Steven's Spring, #17010

Net Acres: 4955

Description

The Steven's Spring roadless area lies on the southwestern tip of the Shoshone Range approximately 60 miles northwest of Tonopah. Improved dirt roads lie along the northern and eastern boundaries. The unit lies about six miles from the State Highway 89. Remeasurement of this area has shown it to contain less than 5,000 acres, and therefore does not meet minimum requirements for wilderness consideration. This area will not be evaluated further.

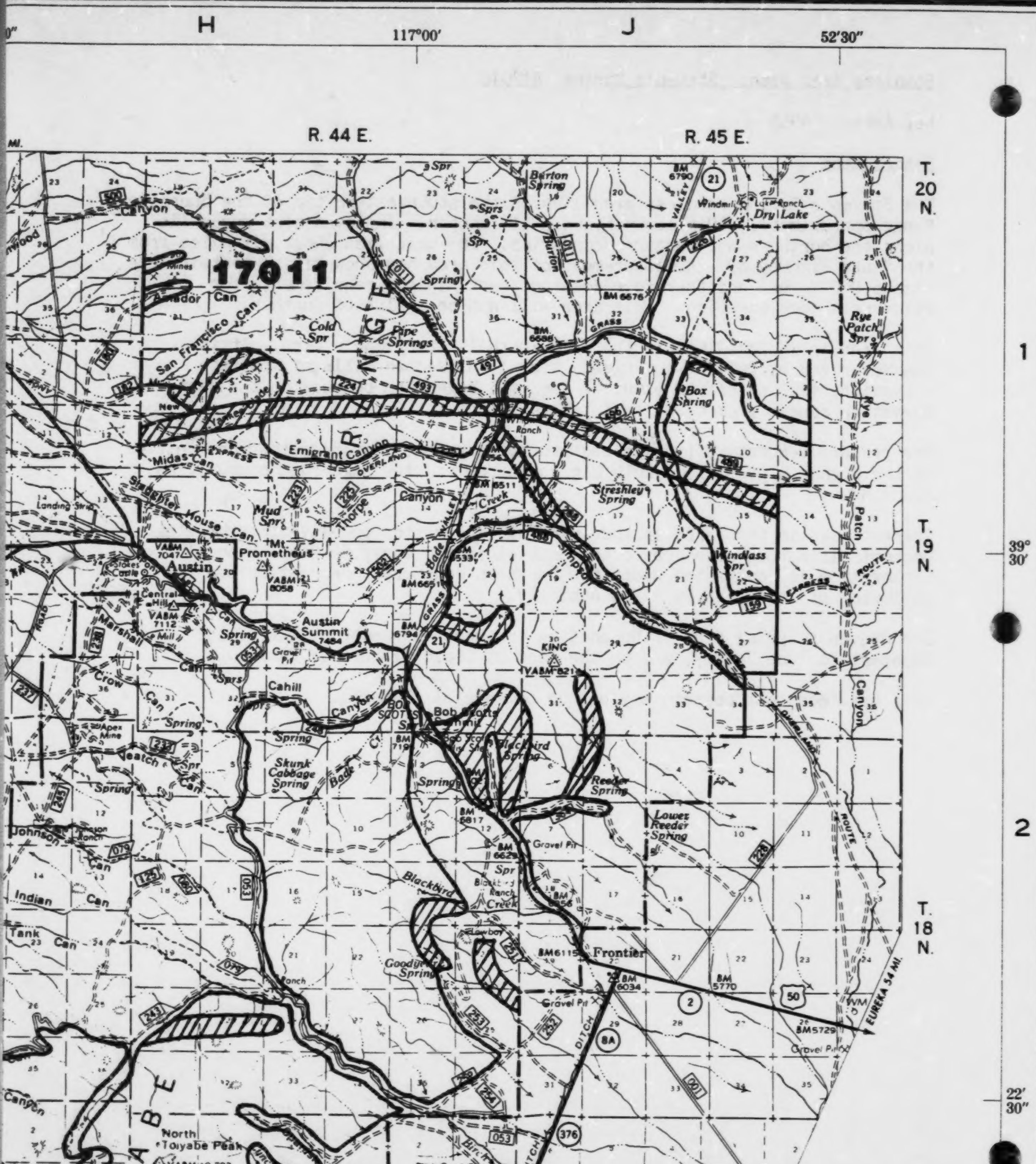
This area is included within the Arid Foothill topographic type. It is characterized by rolling or rugged, steeply dissected hills of moderate elevation, falling off to alluvial fans and sagebrush benches on the west. Elevation ranges from 6,200 feet to 7,400 feet.

The primary vegetative type is sagebrush, with some pinyon-juniper communities at the higher elevations. Both big sagebrush and low sagebrush communities occur here.

Current uses in this area include mineral exploration and livestock grazing. Domestic livestock have grazed the unit since the early 1900's. Mineral exploration is contracted along the northern boundary. Recreation use is estimated at less than 50 RVD's annually.

The Steven's Spring area is bounded on the west and south by low hills adjacent to Ione Valley, and on the east by broad Cloverdale Canyon.

This area does not contain any unique or special features.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17011
WILLOW CREEK
Austin
Austin Summit 7484
Mt. Prometheus
Emigrant Canyon
Midas Can
Slaughter House Can.
San Francisco Can
Amador Can
Cold Spr
Pipe Springs
Burton Spring
Dry Lake
Box Spring
Streshley Spring
Windlass Spr
Rye Patch Spr
Mud Spr
Cahill
Bob Scotts Summit
Blackbird Spring
Reeder Spring
Lower Reeder Spring
Skunk Cabbage Spring
Goodyear Spring
Blackbird Ranch
Frontier
Marshall Can
Crow Can
Veatch Can
Johnson Can
Indian Can
Tank Can
North Toiyabe Peak
VABM 10.793
TOIYABE
Birch Creek Ranch
Birch Creek Canyon
KING
VABM 7047
VABM 7112
VABM 6058
BM 6790
BM 6676
BM 6686
BM 6511
BM 6533
BM 6651
BM 6794
BM 6817
BM 6629
BM 6115
BM 6034
BM 5770
BM 5729
BM 5674
EUREKA 54 MI.
Gravel Pit
Borrow
OVERLAND
EXPRESS
ROUTE
DITCH
Patch
Canyon
21
2
8A
50
376

Roadless Area Name: Willow Creek, #17011

Net Acres: 7025

Description

The Willow Creek roadless area lies at the northern end of the Toiyabe Mountain Range approximately five miles north of the town of Austin, Nevada. The east slope is rolling and gently dissected by small canyons which extend to the high elevation valley floor in Simpson Park. The west slope is more rugged, extending from the Reese River valley floor to sharp breaking canyons and the crest zone. The area has no particularly outstanding features to differentiate it from the common landscape.

Access to the area is moderately restricted. A short stretch of improved dirt road borders it on the east. All other portions of the area are accessed by unimproved dirt roads. Very few sub-standard "jeep" roads exist in the area.

The area lies within the Intermountain Sagebrush/Mountain Mahogany-oak scrub ecosystem (3130-031). Vegetation is mainly low sagebrush communities on the ridgetops and big sagebrush communities on the slopes, canyon bottoms, and foothills. There are one or two scattered patches of pinyon/juniper and mountain mahogany.

The area is moderately mineralized. Evidence of past mineral exploration and development occurs near the western and southern boundaries.

Recreation use is limited to occasional "rock hounding" most of the year. During the fall, the area receives fairly heavy use for upland game and deer hunting. The eastern portion of the area has fairly high populations of sage grouse. Recreation use is approximately 200 RVD's each year.

A utility corridor with approximately three miles of high voltage powerline, and constructed roads (see map) forms the southern boundary of the roadless area.

The primary current use of the area is for livestock grazing. A single band of sheep uses the western portion of the area for about one week in the early summer. The eastern portion is used by cattle.

The area is within a proposed supersonic operating area for high performance military aircraft. Sonic booms can be heard within the area on occasion. In addition to the supersonic activities, a low level navigation route crosses the area. During intensive training periods, jet aircraft flying at altitudes less than 200 feet above the ground will cross over the area several times a day.

Capability

There are no distinct topographic features to provide a more definable boundary for a potential wilderness. The northern and western sides are fenced along the Forest boundary to help manage these portions of the roadless area.

The natural integrity of the area has been moderately compromised by past mining activities and development of livestock watering facilities. The natural appearance of the area has not been altered significantly, however.

Opportunities for solitude are low due to the small size and the lack of vegetative and topographic screening within the area.

There are limited opportunities for primitive recreation or challenging experiences within the area. Size, lack of screening, and rugged topography are the major limitations to these activities.

No known threatened or endangered species occur within the area and there are no unique ecosystems or special geological features.

Availability

Recreation use is primarily limited to the fall hunting seasons. Some rock hunting occurs at other times of the year. There appears to be limited opportunity to increase either developed or dispersed recreation in the area.

Wildlife populations are not significantly different in this area when compared to other areas of central Nevada. Some important sage grouse habitat does occur here, however. The potential exists to enhance wildlife habitat by implementing an intensive livestock management system, and by prescription burning in the mountain big sagebrush communities.

There is limited potential to increase the harvest of the timber resource in the area due to the association of pinyon/juniper communities with rugged terrain.

Water is fairly well distributed throughout the area. Potential for developing additional water is limited. There is little need to do any watershed improvement work.

The western half of the area is grazed by domestic sheep for a one week period near the end of June each year. Range condition is generally good in this area with forage production being moderate to high. Cattle use the eastern portion of the area with use starting in mid to late June and lasting until mid October of each year. Overall range condition in this portion of the area is only fair with the occurrence of some poor condition range. Forage production is slightly less than the western portion. There is little potential for vegetative type conversions to increase livestock forage. Prescribed burning to enhance wildlife habitat diversity will increase available livestock forage to a limited extent. Several range improvement fences and water developments are located in the area.

Mineralization is evident by the number of mineral exploration roads and past mining scars. Some patented land is presently being developed for its mineral resources. Potential for future mineral exploration and development appears to be high.

The Overland Stage Route and Pony Express Trail lie immediately to the south. Virtually no archaeological investigation has been conducted, the environment is similar to the pinyon-juniper/sagebrush ecotone in other areas where prehistoric cultural resource sensitivity is known to be moderate to high. It is likely that at least resource procurement sites with moderately dense artifact assemblages occur in this unit. Currently, the significance of such sites is unevaluated.

The area contains approximately 300 acres of private land, in the vicinity of Pipe Springs and Willow Creek. There are no associated access problems with these lands.

Historical occurrence of fire has been low although the potential for a large brush fire exists. No major fires have occured recently. The majority of fires have been less than 1/4 acre is size.

Insect and disease problems do not occur on a large scale.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, approximately 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada, areas 150 miles west and the Las Vegas, Nevada, area 250 miles to the south.

During the RARE I and Central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Mountain Mahogany-oak scrub ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Willow Creek

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							7.0		7.0
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.			7.0			7.0			
Stewardship Wildlife, Range & Dispersed Rec.	7.0			7.0	7.0				
Market Opportunities (Timber and/or Grazing)		7.0						7.0	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Willow Creek*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	1	0	0	0	0	0	1	0
Livestock Grazing	AUM	633	666	597	633	597	597	597	666	597
Dispersed Recreation	MRVD	1.2	.9	1.2	1.2	1.0	1.2	1.2	.9	1.2
Wildlife	MWFUD	.7	.2	.9	.7	.7	.9	.9	.2	.9
Wildlife Habitat Improvement	Acres	0	0	6	0	3	6	0	0	0
Fuel Management	Acres	0	5	0	0	0	0	0	5	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

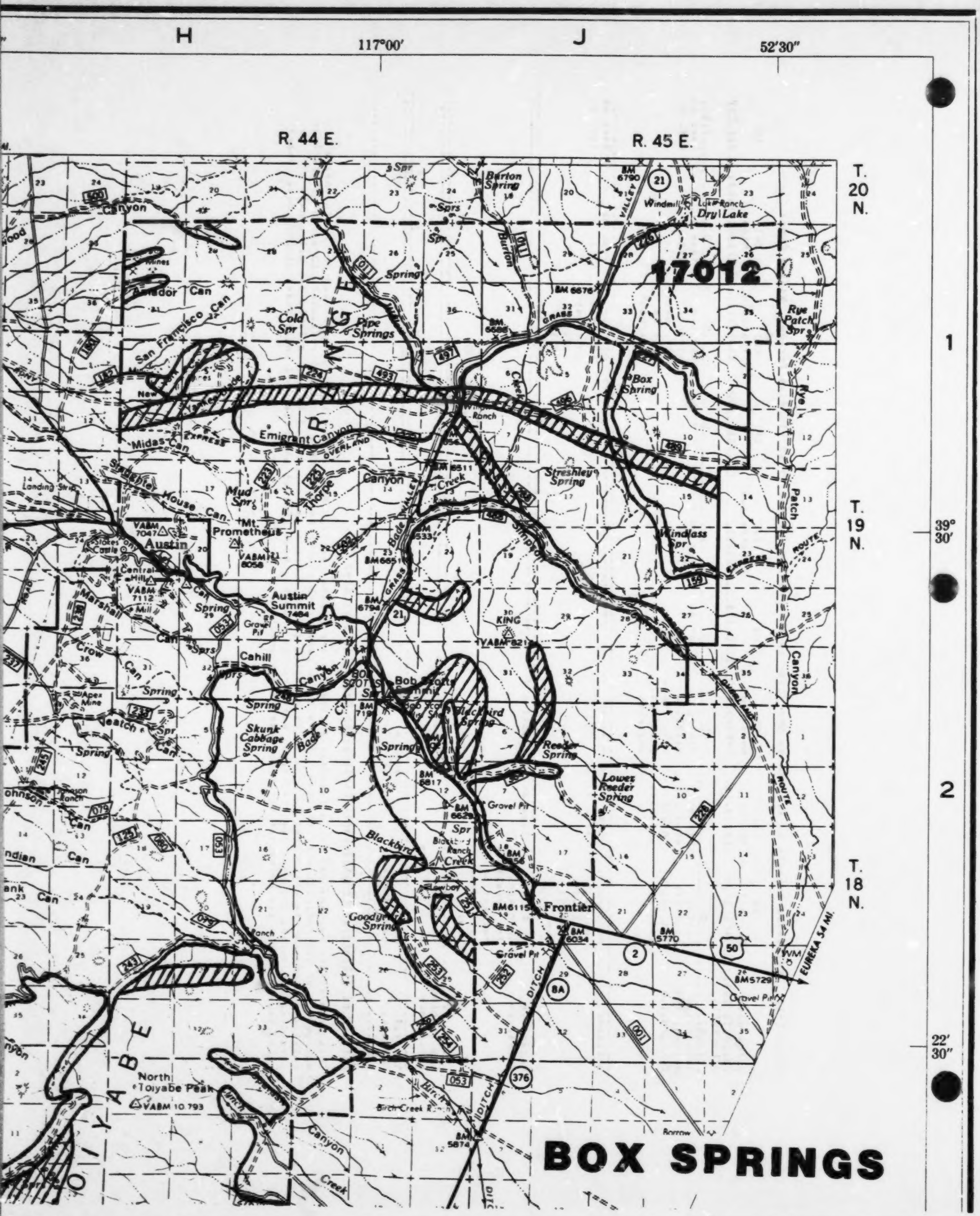
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Willow Creek

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	7.0	0	7.0
Integrity/ Naturalness (Int./Nat.)	Mining activity Int./Nat. moderate	Mining, wood prod. Int./Nat. moderate	Mining, wildlife hab. impr. Int./Nat. moderate	Same as Alt. A	Same as Alt. C	---------------->	Reduced mining. Int./Nat. will be mod./high	Same as Alt. B	Same as Alt. F
Solitude	No change. Oppor. for solitude remains low	Same as Alt. A	-->				ORV restrictions increase solitude to low/ moderate	Same as Alt. A	Same as Alt. F
Primitive Recreation	No Change. Opportunity for primitive recreation will remain low.	Same as Alternative A	-->						
Challenging Experience	Limited opportunities		Same as Alt. A	-->					
Special Features	Not represented		Same as Alt. A	-->					

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 60 acres of wildlife habitat improvement is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.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17012
Burton Spring
Burton
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Lake Ranch
Dry Lake
Grass Valley
Canyon
Amador Can
San Francisco Can
Cold Spr
Pipe Springs
Spring
Rye Patch Spr
Box Spring
Emigrant Canyon
Overland
Midas Can
Express
Stokes Castle
Mud Spr
Thorpe
Mt. Prometheus
Landing Strip
House Can.
VABM 7047
Austin
Central Hill
VABM 7112
Mill
Marshall
Can
Spring
Austin Summit 7484
Gravel Pit
Canyon
Bade
Streshley Spring
Windlass Spr
Express Route
Patch
King
VABM 6821
Cahill
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Crow Can
Apex Mine
Veatch Spr Can
Spring
Skunk Cabbage Spring
Bob Scott Summit
Bob Scott Spr
Blackbird Spring
Reeder Spring
Lower Reeder Spring
Johnson Ranch
Indian Can
Blackbird Ranch
Blackbird Creek
Spr
Cowboy
Goodyear Spring
Frontier
Gravel Pit
Ditch
Ranch
Toiyabe
Range
North Toiyabe Peak
VABM 10,793
Birch Creek Ranch
Canyon
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Borrow
Canyon
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Eureka 54 Mi.
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BM 5729
BM 5770
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BOX SPRINGS

Roadless Area Name: Box Springs, #17012

Net Acres: 4100

Description

The Box Springs roadless area is in the extreme north east corner of the Toiyabe Range north of U.S. 50 and east of Austin, Nevada. The area is accessible via the Grass Valley Road, State Highway 21.

The area is a large dry sagebrush flat with low rolling pinyon covered hills to the east. The topography is quite gentle compared to other areas of National Forest lands in central Nevada.

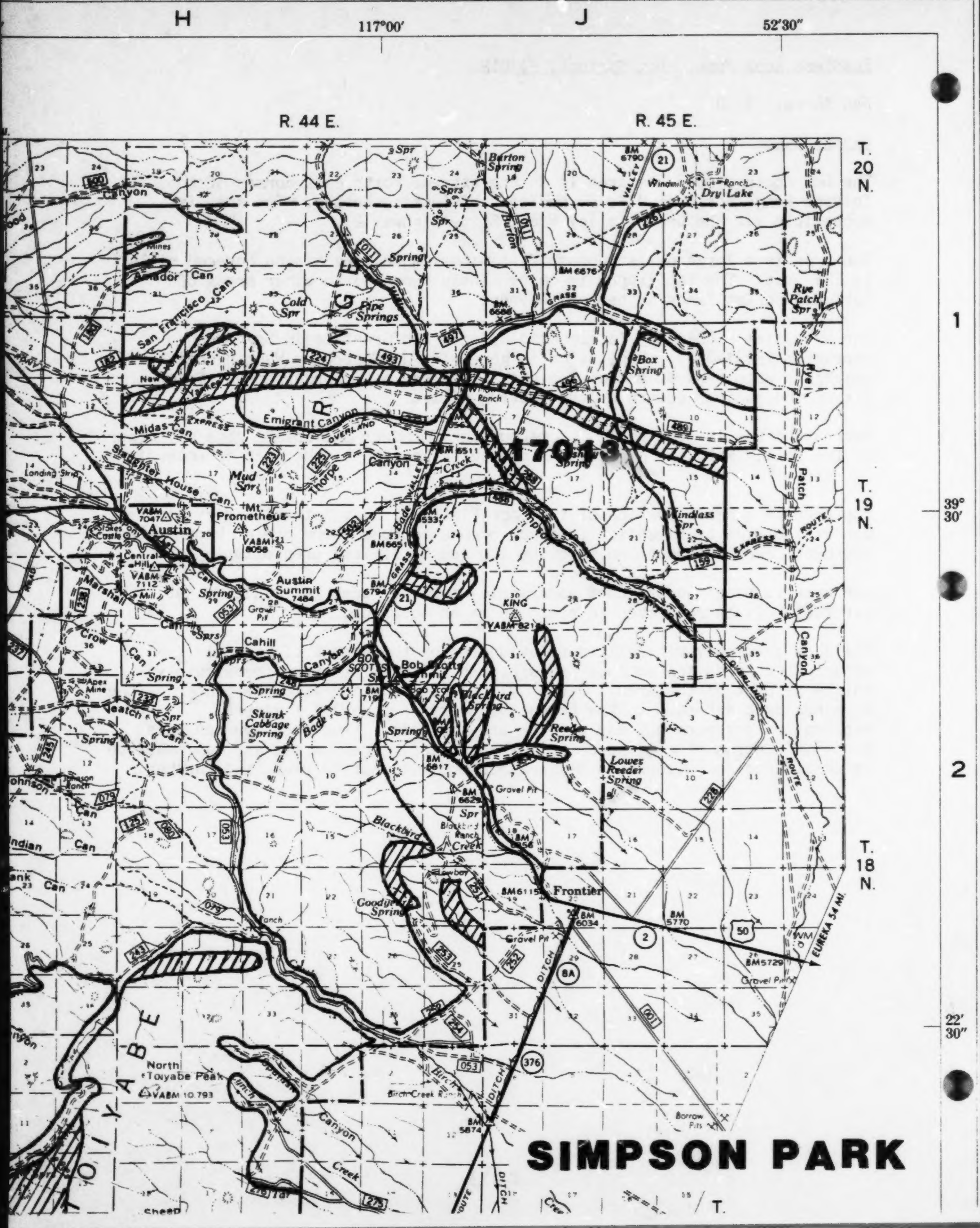
The area lies within the Intermountain Sagebrush/Great Basin Sagebrush ecosystem (3031-032). Vegetation is generally dominated by Wyoming big sagebrush with various associated grass species in the understory. Some pinyon and juniper occurs on the eastern hills.

Recreation use is negligible. Some hunting for deer and upland game may occur in the fall. Wildlife populations are quite low due to the lack of water in the area.

The area is a small portion of the Bade Flat grazing allotment. Very limited use of the area by domestic livestock occurs because there are no known water sources. Forage production is quite low due to limited precipitation.

The area is within a proposed supersonic operating area for military jet aircraft. It is subjected to sonic booms on occasion.

The area is highly mineralized as evidenced by the amount of mineral exploration roads and surface disturbances which exist over approximately thirty percent of the area. Recently, the road running into the center of the area has been extended to the Forest boundary (see map) for mineral exploration purposes and has cut the area in half. Each area now has less than 5,000 acres of continuous undisturbed land. These areas are too small to be considered for wilderness designation and will not be evaluated further.



SIMPSON PARK

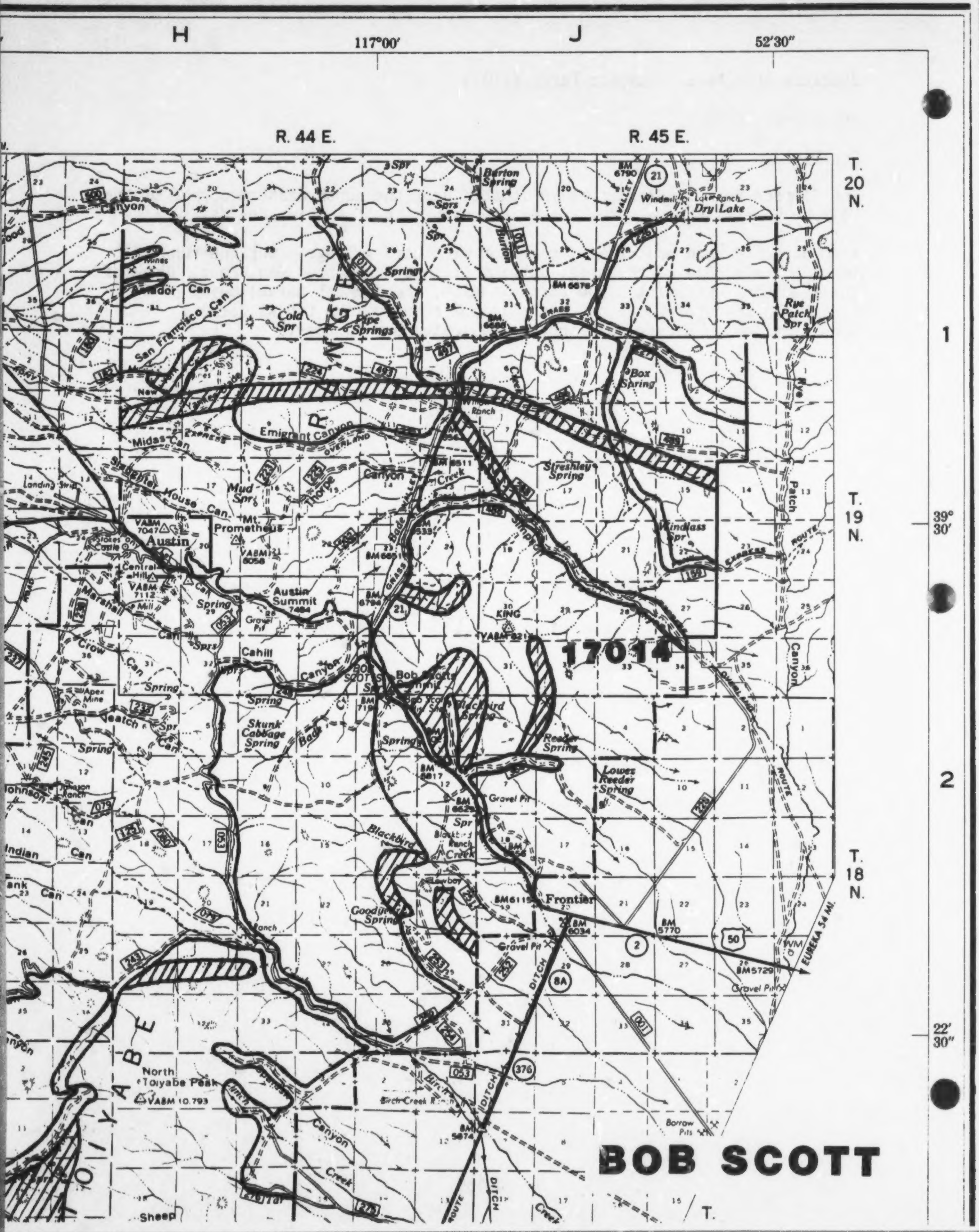
Roadless Area Name: Simpson Park, #17013

Net Acres: 4110

Description

The Simpson Park roadless area is located near the north eastern corner of the Toiyabe Mountain Range about ten miles north east of Austin, Nevada.

A constructed road and utility corridor with high voltage powerline runs through the middle of the area, cutting it into three roadless areas. None of the resulting areas are 5,000 acres in size, the largest parcel being 4110 acres, and therefore does not meet minimum requirements for wilderness consideration. The area will not be evaluated any further.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Pipe Springs
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San Francisco Can
Amador Can
Mines
New Pass
Emigrant Canyon
Midas Can
Overland Express
Wingfield Ranch
Streshley Spring
Windlass Spr
Landing Strip
Slaughter House Can
Mud Spr
Mt. Prometheus
Thorpe Canyon
Austin
VABM 7047
VABM 6056
Central Hill
VABM 7112
Mill
Marshall Can
Austin Summit 7484
Gravel Pit
KING
VABM 6821
Crow Can
Cahill Canyon
Spring
Bob Scott Summit
Bob Scott Spr
Blackbird Spring
Skunk Cabbage Spring
Apex Mine
Veatch Can
Spr Can
Reeder Spring
Lower Reeder Spring
Johnson Ranch
Indian Can
Blackbird Ranch
Blackbird Creek
Cowboy Spr
Goodwin Spring
Ranch
Frontier
BM 6115
BM 6034
BM 5770
BM 5729
Gravel Pit
EUREKA 54 MI.
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21
376
Ditch
Route
North Toiyabe Peak
VABM 10,793
TOIYABE
Birch Creek Ranch
Birch Creek
Canyon Creek
BM 5874
Borrow Pits
Sheep
Patch
Canyon

BOB SCOTT

Roadless Area Name: Bob Scott, #17014

Net Acres: 10100

Description

The Bob Scott roadless area is located approximately eight miles east of Austin, Nevada, and parallels Highway 50 on the east side of the Toiyabe Mountain Range.

Topography is represented by low rolling hills which extend into Grass Valley on the west and into Big Smoky Valley on the east.

The area is easily accessible by paved highway in the south and an improved dirt road on the east. Several unimproved dirt roads protrude into the area. Also several miles of sub-standard "jeep" trails traverse the area.

The area lies within the Intermountain Sagebrush/Juniper Pinyon Woodland ecosystem (3031-021). Vegetation is dominated by the pinyon juniper community over most of the area, but some big sagebrush sites occur in canyon bottoms and in the foothill area of Simpson Park. Just north and east of Bob Scott summit a major fire burned through the pinyon-juniper, and that area is now dominated by sagebrush, native perennial grasses, and crested wheatgrass.

Some mineralization occurs within the area, particularly in the northwest portion. There is also evidence of past mineral exploration and development activities.

Recreation use is mainly associated with wood cutting and pinyon nut gathering. Three areas designated for personal use woodcutting, approximately 1,500 acres, are near the south and western portion of the area (see map). The gentleness of the topography and the old mining roads make access for wood cutters and hunters especially good in this area. An estimated 500 RVD's of use occurs annually.

This area is a small portion of the Bade Flat grazing allotment. Cattle use occurs mainly during the mid-May to late June period each year. Lack of adequate water restricts livestock use of the area.

The area is within a proposed supersonic operating area for military jet aircraft, and is subjected to sonic booms on occasion. In addition, there is a low level navigation route for these same aircraft that crosses over the area. During intensive training periods, several aircraft per day will follow this route at altitudes less than 200 feet above the ground.

Capability

There are no strong topographic features to provide a more definable boundary for a potential wilderness on the east, south, and west sides of the area. Simpson Park Canyon, on the north, could provide a good topographic boundary. The fenced Forest boundary on the eastern edge could be used as a physical barrier for management purposes. Manageability problems might occur in other parts because of the cherry-stemmed roads and "jeep" trails. The small size of the area also contributes to manageability problems.

The natural integrity and appearance of the area has been degraded slightly by mineral exploration activities.

Opportunities for solitude are low due to the small size and relative lack of vegetative or topographic screening. These factors also limit opportunities for primitive recreation or challenging experiences.

No known threatened or endangered species occur within the area and there are no unique ecosystems or special geological features.

Availibility

Recreation use is primarily in the fall involving wood cutting and hunting activities. Opportunities to increase developed or dispersed recreation in the area is limited.

Wildlife populations are fairly low in this area. Lack of water and habitat diversity are contributing factors. Some mainpulation of the pinyon/juniper community and additional development of water could benefit wildlife.

Harvesting of the timber resource could be increased by cutting cordwood, posts, and Christmas trees. Pinyon nut harvests continue to be cyclical and depend on the production of nuts in any particular year. Terrain would allow timber to be harvested over most of the area.

Water is lacking and poorly distributed over most of the area. Some potential exists to increase water sources by construction of small reservoirs to catch runoff, and by drilling horizontal wells.

The area is grazed by cattle for a short period of time during the early summer. Range conditions are fair to good with low to moderate forage production capabilities indicative of limited precipitation and soil types. Some range improvement fences and water developments are located in the area. There is potential for vegetative conversions either by chaining and seeding in pinyon juniper communities, or by burning in sagebrush types. Limited benefits would be derived from these activities unless more water could be developed.

Mineralization is evident by the numerous mining claims. Surface disturbance from past mining activities has been minimal. Potential exists for uranium exploration based on some past uranium activities.

Several rock chimneys of historical interest occur in the area.

Virtually no archaeological investigation has been conducted the environment is similar to the pinyon-juniper/sagebrush ecotone in other areas where prehistoric cultural resource sensitivity is known to be moderate to high. It is likely that at least resource procurement sites with moderately dense artifact assemblages occur in this unit. Currently, the significance of such sites is unevaluated.

Historical occurrence of fire has been low although the potential for large brush fires exists. The Blackbird fire in 1947 burned approximately 2,000 acres.

Insect and disease problems do not occur on a large scale.

There are about 120 acres of non-National Forest land in the area. They do not effect access or manageability of the area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada, areas 150 miles west and the Las Vegas, Nevada, area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper/Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Bob Scott

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							10.1		10.1
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.			10.1			10.1			
Stewardship Wildlife, Range & Dispersed Rec.	10.1			10.1	10.1				
Market Opportunities (Timber and/or Grazing)		10.1						10.1	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Bob Scott*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	883	929	832	883	832	832	832	929	832
Dispersed Recreation	MRVD	1.6	1.2	1.6	1.6	1.3	1.6	1.6	1.2	1.6
Wildlife	MWFUD	.9	.4	1.3	.9	.9	1.3	1.3	.4	1.3
Wildlife Habitat Improvement	Acres	0	0	9	0	4	9	0	0	0
Fuel Management	Acres	0	6	0	0	0	0	0	6	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

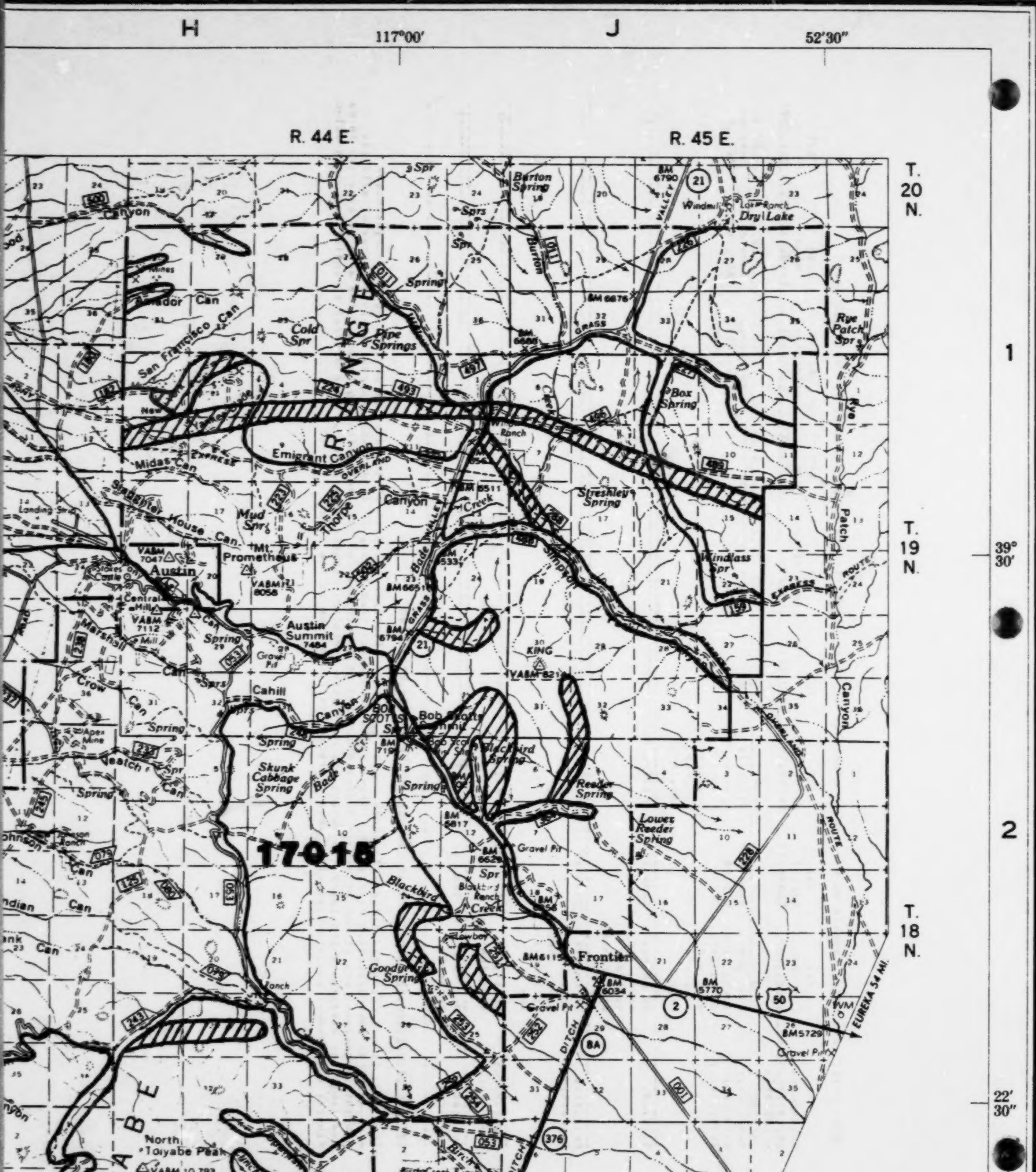
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Bob Scott

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	10.1	0	10.1
Integrity/ Naturalness (Int./Nat.)	Wood products scheduled Int./Nat. will remain high	Same as Alt. A	Wildlife hab. impr. & wood products Int./Nat. mod./high	Same as Alt. A	Same as Alt. C	----------------->	No change Int./Nat. will remain high	Same as Alt. A	Same as Alt. F
Solitude	No change oppr. for solitude will remain low	Same as Alternative A ----------------------------------->							
Primitive Recreation	No change oppor for prim. rec. will remain low	Same as Alternative A ----------------------------------->							
Challenging Experience	Limited opportunities	Same as Alternative A ----------------------------------->							
Special Features	Not represented	Same as Alternative A ----------------------------------->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 90 acres of wildlife habitat improvement and 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.


H
117°00'
J
52'30"
R. 44 E.
R. 45 E.
T. 20 N.
T. 19 N.
T. 18 N.
1
2
39° 30'
22' 30"
Burton Spring
Dry Lake
Lake Ranch
Windmill
Amador Can
San Francisco Can
Cold Spr
Pipe Springs
Spring
Rye Patch Spr
Box Spring
Emigrant Canyon
Midas Can
Stokes Castle
Mud Spr
Mt. Prometheus
Austin
Austin Summit 7484
Streshley Spring
Windlass Spr
Canyon
Creek
Bade
KING
VABM 7047
VABM 7112
VABM 6058
Marshall Can
Crow Can
Cahill Canyon
Bob Scott Summit
Blackbird Spring
Reeder Spring
Lower Reeder Spring
Skunk Cabbage Spring
Veatch Can
Apex Mine
Johnson Ranch
Indian Can
17015
Blackbird Ranch
Gravel Pit
Cowboy
Goodwin Spring
Frontier
BM 6034
BM 5770
BM 5729
EUREKA 54 MI.
North Toiyabe Peak
VABM 10,793
Birch Creek Ranch
Canyon
Creek
Borrow
TOIYABE RANGE
DITCH
ROUTE
OVERLAND
EXPRESS
GRASS
VALLEY
Patch
Canyon
21
2
8A
50
376

BADE CREEK

Roadless Area Name: Bade Creek, #17015

Net Acres: 9475

Description

The Bade Creek roadless area is located on the south side of U.S. Highway 50, approximately eight miles east of Austin, Nevada. Topography is represented by low rolling foothills in the eastern portion and higher, steeper ridges and mountain tops in the center. The area is an open sagebrush parkland interspersed with aspen groves.

The area is accessible by paved highway, improved and unimproved dirt roads (see map for newly identified roads). There are many miles of sub-standard "jeep" roads running throughout the interior of the area.

The area lies within the Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem (3031-021). Vegetation varies from pinyon-juniper and mountain mahogany communities on the mid slopes and foothills to sagebrush grass communities on the higher slopes and basins. Significant groves of aspen are found near water sources and near the crest of the mountain range where snow accumulates.

Substantial mineralization occurs over much of the area. Approximately 80 percent of the area is staked with mining claims. Present mining exploration operations for uranium and silver exist.

Recreation use in the area is fairly high. Some camping use is made of the area when the Bob Scott campground, just north of the boundary is full. The area is very popular and is heavily hunted for sage grouse and deer. It is estimated that 1,000 RVD's use is made of the area.

Portions of two grazing allotments fall within this roadless area. Both allotments are used by cattle during the summer months. Almost the entire area is suitable for livestock use.

Capability

There are no good topographic features to provide a more definable boundary for a potential wilderness. Manageability problems would occur because of the many "jeep" trails running through the area and because of the historical heavy use that is made of these trails for hunting.

Opportunities for solitude are very low in this area. Lack of vegetative or topographic screening and the heavy vehicular use contributes to this.

The natural integrity and appearance of the area have been altered. Mineral exploration activities, the many "jeep" trails, and numerous range developments for livestock degrade these natural qualities.

Opportunities for primitive recreation or challenging experiences are also limited.

No known threatened or endangered species occur within the area. There are no special geographical features or unique ecosystems.

Availability

Recreation use is heavy during the fall deer and upland game bird hunting seasons. Some overnight camping occurs during the summer months. There is high potential to increase both developed and dispersed recreation in the area.

Wildlife populations are fairly high in the area due to good water supplies and an excellent diversity of habitat. Unique species in the area include blue grouse and goshawk.

Potential for improving wildlife habitat include stimulating aspen regeneration by cutting or burning. Improving meadow conditions by managing livestock more intensively and spraying iris. Opening up pinyon/juniper stands by harvesting fuelwood and juniper posts would further improve.

Potential exists to more intensively manage the timber resource. Harvesting of fuelwood, posts, poles, and commercial Christmas trees could be initiated. Pinyon nut harvests on the commercial level would continue to be cyclical and depend on production of the product in any given year. Access to a majority of the timber resource would be restricted by terrain.

Water in the area is abundant and well distributed. There does not appear to be a need to increase water supplies at the present time.

The area is grazed by cattle from mid-May to mid-October each year. Range conditions are generally fair to good with moderate to high forage production capabilities. The area has many range developments including both fences and water. Some prescribed burning has been done in sagebrush communities to increase forage production. Reconstruction of most of the water developments is needed and some additional burning could be done.

Surface disturbance from past mining activities is evident. Future exploration and mineral development is anticipated, especially for uranium.

Historical occurrence of fire has been low although the potential for large brush fires exists. No major fires have occurred recently. The majority of fires have been less than 1/4 acre in size.

A rock wall of unknown origin is located in the unit. Virtually no archaeological investigation has been conducted. The environment is similar to the pinyon-juniper/sagebrush ecotone in other areas where cultural resource sensitivity is known to be moderate to high. It is likely that at least resource procurement sites with moderately dense artifact assemblages occur in this unit. Currently, the significance of such sites is unevaluated.

Insect and disease problems do not occur on a large scale. There are approximately 10 acres of private land within the roadless area. The private land does not restrict public access.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada, areas 150 miles west and the Las Vegas, Nevada, area 250 miles to the south.

During the RARE I and centeral Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Bade Creek

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							9.5		9.5
Minimum Level (Custodial)					9.5				
Intensive Wildlife & Dispersed Rec.			9.5	9.5		9.5			
Stewardship Wildlife, Range & Dispersed Rec.	9.5								
Market Opportunities (Timber and/or Grazing)		9.5						9.5	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Bade Creek*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	1	0	0	0	0	0	1	0
Livestock Grazing	AUM	790	856	778	778	748	778	778	856	778
Dispersed Recreation	MRVD	1.4	1.0	1.9	1.9	1.0	1.9	1.[illegible]	1.0	1.9
Wildlife	MWFUD	.7	.4	1.5	1.5	.4	1.5	1.5	.4	1.5
Wildlife Habitat Improvement	Acres	0	0	20	20	0	20	0	0	0
Fuel Management	Acres	0	3	0	0	0	0	0	3	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

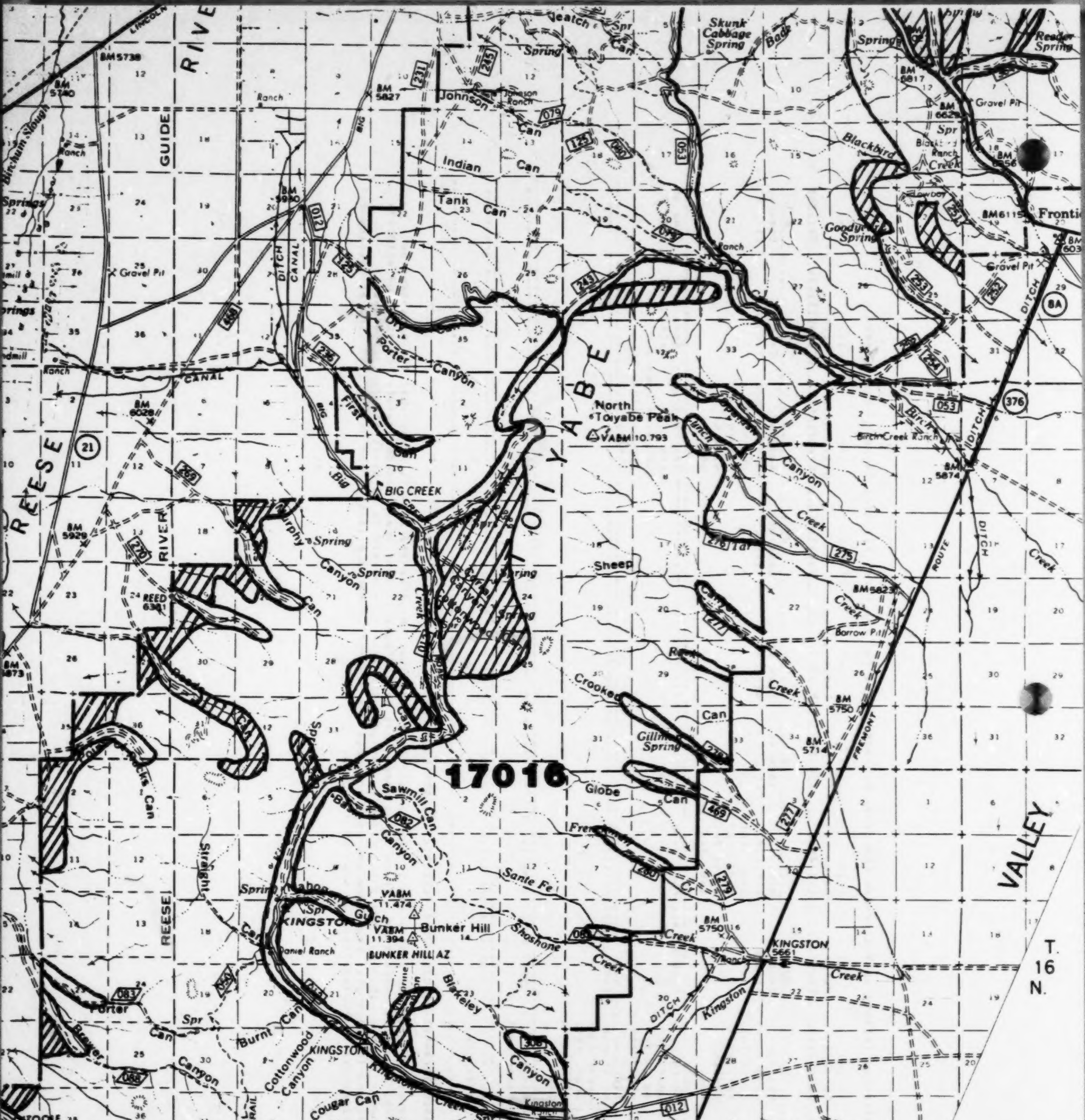
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Bade Creek

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	9.5	0	9.5
Integrity/ Naturalness (Int./Nat.)	Mining, wood products Int./ Nat. will remain low	Same as Alt. A	Mining, wildlife hab. impr. wood products Int./ Nat. low	Same as Alt. C	Same as Alt. A	Same as Alt. C	Reduced mining wood products Int./Nat. will be low/mod.	Same as Alt. A	Same as Alt. F
Solitude	No change oppr. for solitude will remain low	Same as Alternative A					ORV restriction will increase oppor. for solitude to low/mod.	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change oppor for prim. rec. will remain low	Same as Alternative A							
Challenging Experience	Limited opportunities	Same as Alternative A							
Special Features	Not represented	Same as Alternative A							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 200 acres of wildlife habitat improvement is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



BUNKER HILL

17016
TOIYABE
North Toiyabe Peak
VABM 10,793
REESE RIVER
GUIDE
CANAL
DITCH
Johnson Can
Indian Can
Tank Can
Porter Canyon
First
Big Creek
BIG CREEK
Murphy Spring
Skunk Cabbage Spring
Blackbird Creek
Goodyear Spring
Birch Creek Ranch
Birch Creek
Sheep
Crooked Can
Gillman Spring
Globe Can
Sawmill Can
Santa Fe
Shoshone Creek
Kingston Creek
KINGSTON
KINGSTON 5661
Bunker Hill
VABM 11,474
VABM 11,394
BUNKER HILL AZ
Daniel Ranch
Cottonwood Canyon
Burnt Can
Cougar Can
Broad
Clear
Carseley Creek
Kingston Ranch
Airstrip
VABM 6166
Gravel Pit
Borrow Pit
SMOKEY VALLEY
FREMONT ROUTE
TRAIL CREST
TOOLE
Spring
Frontier
8A
376
21
T. 16 N.
N.

Roadless Area Name: Bunker Hill, #17016

Net Acres: 32105

Description

The Bunker Hill area is located in the Toiyabe Mountain Range north of Kingston, Nevada. Most of the area has a steep, rugged alpine landscape.

Topography is characterized by long narrow canyons, and steep rocky slopes rising abruptly from the alluvial fans of the valley floor. Elevations range from 7,500 to 11,000 feet.

The area is easily accessible from improved dirt roads forming its southern and western boundaries. Unimproved dirt roads bound it on the north and protrude into the canyons on its eastern side.

The area lies within the Intermountain Sagebrush/Sagebrush Steppe ecosystem (3031-049).

Vegetation ranges from a big sagebrush-grass type on the alluvial fans through the pinyon-juniper and mountain mahogany types, extending upward into isolated stands of aspen, sagebrush, and occasional limber pine. Well defined avalanche paths exist in the higher elevations.

Mineralization is widespread. Evidence of past and present mining exploration is scattered throughout the accessible portions of the area. Most of the recent activity has occurred in the Birch Creek area in the north and the Victorine Canyon area in the south (see map).

Recreation use is mainly associated with hunting and fishing in the Birch Creek/Big Creek/Kingston Creek areas. As mentioned before, access from these roaded areas is very easy and therefore, recreation use is quite high for central Nevada (1,000 RVD's).

Portions of two cattle allotments and one sheep allotment are within the area. One of the cattle allotments is for summer use from the first of June to the end of September. The other cattle allotment is a winter allotment utilizing the foothills near the eastern boundary of the area. Use on this allotment is from the first of December through the end of March. The sheep allotment is used from the first of July to the end of October (5,000 sheep months).

Lahontan cutthroat trout, a federally listed threatened species, occurs in Shoshone Creek in the south eastern portion of the area.

Following the Big Creek fire of 1964, approximately 900 acres of steep slopes on the western side of the area was contour trenched to reduce erosion hazards (see map). These trenches are highly visible.

The area is within a proposed supersonic operating area for military aircraft. It is subjected to sonic booms on occasion.

Capability

The steepness of the terrain provides a fairly well defined boundary for a potential wilderness with the exception of the foothill areas on the eastern boundary. Some minor boundary changes in that area would make the area more manageable without seriously detracting from the overall size or quality of the area.

The natural integrity and appearance of the area has not been degraded significantly by man's activities except in the vicinity of the recent mineral exploration activity in Birch Creek and near the contour trenches in Big Creek.

Opportunities for solitude are quite high in the upper portions of the area. Its large size, high level of topographic screening, and distances from the center to the perimeter all contribute to a high level of solitude. Opportunities for primitive recreation and challenging experiences are good for the same reasons.

No unique ecosystems or special geological features are known to exist in the area. Lahontan cutthroat trout occur in Shoshone Creek.

Availability

Recreation use is primarily on the periphery of the area and is generally associated with recreational activities tied to Big Creek, Birch Creek and Kingston Creek. All three streams are in road corridors bordering the roadless area. Moderately heavy use is made of the area for upland game bird and deer hunting in the fall. Opportunities are limited to increase developed recreation, but dispersed recreation could be enhanced by development of an adequate trail system in the area.

Wildlife populations are fairly high due to good water supplies and habitat diversity. Unique species occurring in this area are blue grouse, goshawk, and Lahontan cutthroat trout. Potential for improving wildlife habitat is minimal and may not be cost effective.

There is limited potential to increase timber outputs in the area. Some small commercial Christmas tree sales could be let. Areas with suitable trees for cordwood or posts are generally on terrain too steep to be harvested economically.

Water is abundant and well distributed throughout the area. There does not appear to be a need to develop additional water at this time.

The area is primarily grazed by domestic sheep with some cattle use occurring in the northern and eastern portions. Range conditions are fair to good and forage production is high except in the foothill regions. Very few range improvements occur in the area and there does not appear to be a need to develop additional ones. Vegetative type conversion potential is minimal.

In the vicinities of the most recent heavy mineral exploration activities, potential for additional exploration and development is high.

Historical occurrence of fire has been low although the potential for large brush fires exists. The Big Creek fire of 1964 burned minor portions in the western part of the area. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

Virtually no archaeological investigation has been conducted, the environment is similar to the pinyon-juniper/sagebrush ecotone in other areas where prehistoric cultural resource sensitivity is known to be moderate to high. It is likely that at least resource procurement sites with moderately dense artifact assemblages occur in this unit. Currently, the significance of such sites is unevaluated.

There is approximately 260 acres of non-National Forest lands within the area. These lands do not pose any access problems.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada, areas 150 miles west and the Las Vegas, Nevada, area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Bunker Hill

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			32.1	32.1			32.1	32.1	32.1
Minimum Level (Custodial)					32.1				
Intensive Wildlife & Dispersed Rec.						32.1			
Stewardship Wildlife, Range & Dispersed Rec.	32.1								
Market Opportunities (Timber and/or Grazing)		32.1							
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Bunker Hill*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	0	0
Livestock Grazing	AUM	2797	3002	2797	2797	2797	2797	2797	3002	2797
Dispersed Recreation	MRVD	4.8	3.6	9.5	9.5	3.6	9.5	9.5	9.5	9.5
Wildlife	MWFUD	2.5	2.1	4.1	4.1	2.1	4.1	4.1	4.1	4.1
Wildlife Habitat Improvement	Acres	0	0	0	0	0	24	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

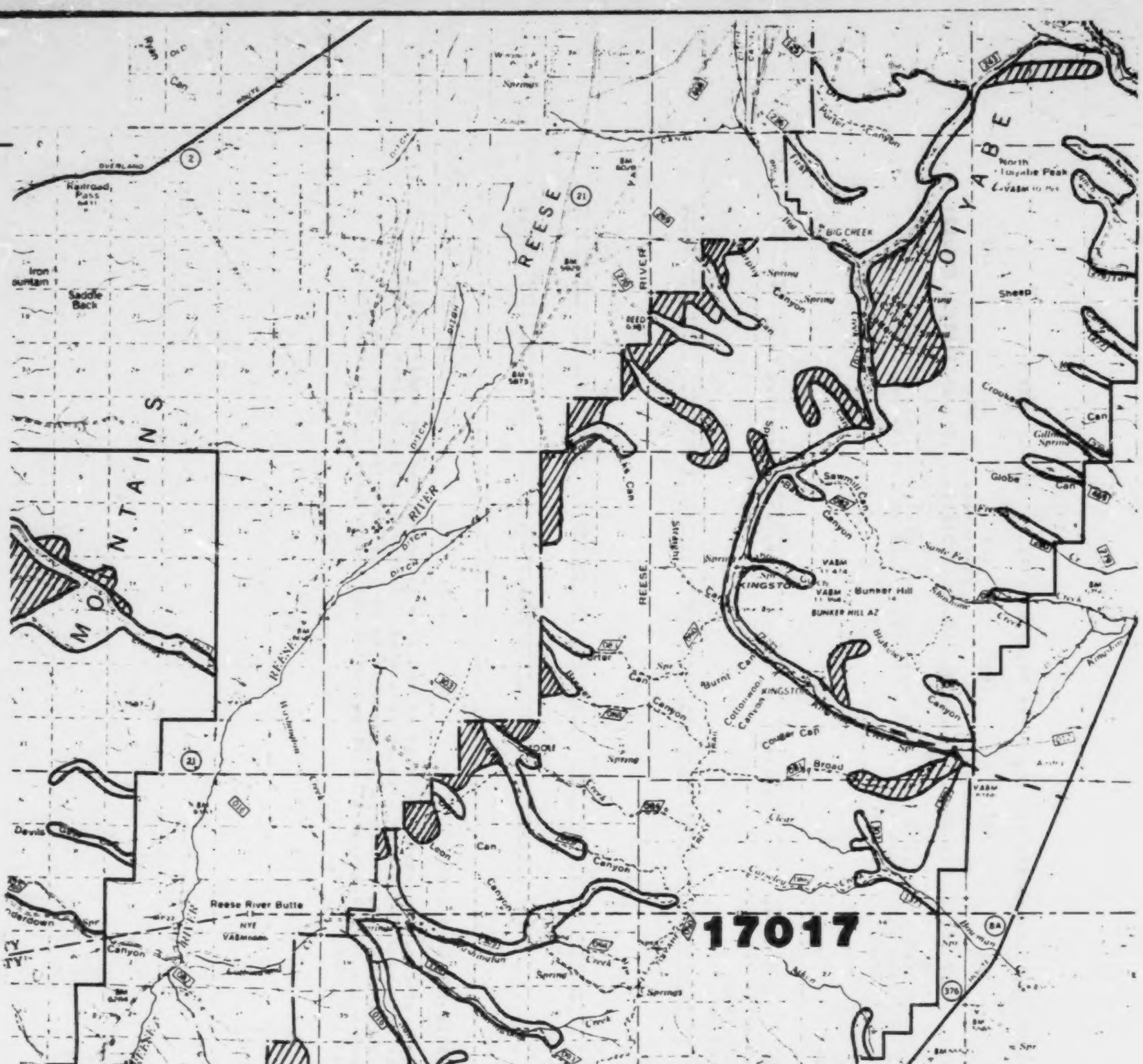
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Bunker Hill

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	32.1	32.1	0	0	32.1	32.1	32.1
Integrity/ Naturalness (Int./Nat.)	Mining, wood products Int./ Nat. will remain moderate	Same as Alt. A	Reduced mining Int./Nat. will be mod/high	Same as Alt. C	Same as Alt. A ---------------->		Same as Alternative C ----------->		
Solitude	No change oppr. for solitude will remain mod./high	Same as Alt. A	ORV restriction will increase oppor. for solitude to high	Same as Alt. C	Same as Alt. A ------->		Same as Alternative C ----------->		
Primitive Recreation	No change oppor for prim. rec. will remain mod./high	Same as Alternative A -->							
Challenging Experience	Moderate/ High opportunities	Same as Alternative A -->							
Special Features	Lahontan Cutthroat trout in Shoshone Cr.	Same as Alternative A -->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 240 acres of wildlife habitat improvement is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



TOIYABE RANGE PEAK

Roadless Area Name: Toiyabe Range Peak, #17017

Net Acres: 108320

Description

The Toiyabe Range Peak roadless area is located in the Toiyabe Mountain Range south and west of Kingston, Nevada. Most of the area has a steep, rugged mountain landscape.

Topography is characterized by long narrow canyons, and steep rocky slopes, rising aburptly from the alluvial fans of the valley floor. Elevations range from 7,500 to 11,000 feet.

The area is accessible from improved dirt roads forming its southern and northern boundaries. Unimproved dirt roads protrude into the canyons on its east and west sides. There are many miles of sub-standard "jeep" roads traversing much of the area.

The area lies within the Intermountain Sagebrush/Mountain Mahogany-oak scrub (3031-031) ecosystem. Vegetation ranges from a big sagebrush-grass type on the alluvial fans through the pinyon-juniper and mountain mahogany types, extending upward into isolated stands of aspen, sagebrush, and occasional limber pine. Well defined avalanche paths exist in the higher elevations.

There is considerable mining activity occurring in portions of the area. Most of the current mining activity is located in Reeds, Deer, and Broad Canyons in the north, and Summit and Wisconsin Canyons in the south (see map).

Recreation use in this area is very high for central Nevada (4,500 RVD's). Most use is related to hunting and fishing areas which are easily accessible by the road corridors running into the area. Moderate use is made of the Toiyabe Crest Trail, a National Recreation Trail, which runs through the center of the roadless area.

Portions of four cattle allotments and one sheep allotment are within the area. All of the cattle allotments are for summer use. The allotment on the eastern foothills is used in conjunction with BLM administered lands and use is from the first of May to the end of October. The other cattle allotments are used from mid-June to the end of September or the middle of October. The sheep allotment is used from the first of July to the end of October (5,000 sheep months). Several crested wheatgrass seedings are on the western boundary of the area (see map).

Lahontan cutthroat trout, a federally listed threatened species, occurs in Washington, Cottonwood, Tierney, Marysville and Crane creeks. A small population of desert big horn sheep uses the south eastern portion of the area during certain times of the year.

The area is within a proposed supersonic operating area for military aircraft, and is subjected to sonic booms on occasion.

Capability

The steepness of the terrain on the eastern side would provide a fairly easily definable boundary for a potential wilderness. Some minor boundary changes in the foothills would make the area more manageable without seriously detracting from its overall size or quality. On the west side, manageability problems might occur from the intrusive roads and the numerous "jeep" roads.

The natural integrity and appearance of the area has not been degraded significantly by man's activities except in the vicinity of the recent mineral exploration activities.

Opportunities for solitude are quite high in the upper portions of the area. Its large size, high level of topographic screening, and distances from the center to the perimeter all contribute to the chances to enjoy the solitude. Opportunities for primitive recreation and challenging experiences are good for the same reasons.

No unique ecosystems or special features are known to exist in the area. Even though several old mining towns were established in the canyons on the western side of the mountains, these old sites are within the road corridors.

The area does include a proposed national landmark "The Wild Granites", a spectacular granite outcrop visable from Smoky Valley and State Highway 8a.

Lahontan cutthroat trout occur in the area.

Availability

Recreation use is primarily on the periphery of the area and is generally stream oriented; Big Creek and Kingston Creek drawing the most use. Heavy use is made of the area for upland game birds and deer hunting in the fall. The Toiyabe Crest Trail receives moderately heavy use from backpackers and equestrians. Opportunities to increase both dispersed and developed recreation are good.

Wildlife populations are fairly high due to good water supplies and habitat diversity. Unique species occuring in this area are blue grouse, goshawk, big horn sheep, and Lahontan cutthroat trout. Hungarian snow partridge have been planted in the Washington Creek drainage but none have been seen in the area since their planting. Potential for improving wildlife habitat is excellent.

There is limited potential to increase timber outputs in the area. Some small commercial Christmas tree sales could be let, but areas with suitable trees for cordwood or posts are generally on too steep of terrain to be harvested economically.

Water is abundant and well distributd throughout the area. Some watershed stabilization could be done in meadow areas at the heads of drainages. Stream habitat conditions could be improved for Lahontan cutthroat trout.

The area is primarily grazed by cattle with the sheep use confined to the northern portion. Range conditions are fair to good and forage production is high except in the foothill regions. Numerous range improvements, fences and water developments, occur in the area. Some prescribed burning has been done and potential for more exists.

Mineralization is wide spread as evidenced by many miles of primitive vehicle trails and numerous surface soil disturbances. Evidence of such activities can be readily observed over approximately 20 percent of the area. Future mineral exploration and extraction is anticipated.

Historical occurrence of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

There are approximately 350 acres of non-National Forest lands within the area. There are no access problems associated with these lands.

Extensive lithic scatters and rock ring complexes have been recorded throughout the area, particularly in and adjacent to major drainages. Based on current data, archaeological sensitivity is suspected to be moderate to high.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada, areas 150 miles west and the Las Vegas, Nevada, area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Toiyabe Range Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness			108.3	108.3			108.3	108.3	108.3
Minimum Level (Custodial)					108.3				
Intensive Wildlife & Dispersed Rec.		108.3				108.3			
Stewardship Wildlife, Range & Dispersed Rec.	108.3								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Toiyabe Range Peak*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	2	0	0	2	2	0	0	0
Livestock Grazing	AUM	5094	5094	5094	5094	4502	5094	5094	5094	5094
Dispersed Recreation	MRVD	17.3	31.8	31.8	31.2	13.2	31.8	31.8	31.8	31.8
Wildlife	MWFUD	9.1	24.1	24.1	24.1	7.4	24.1	24.1	24.1	24.1
Wildlife Habitat Improvement	Acres	168	664	0	0	3	664	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

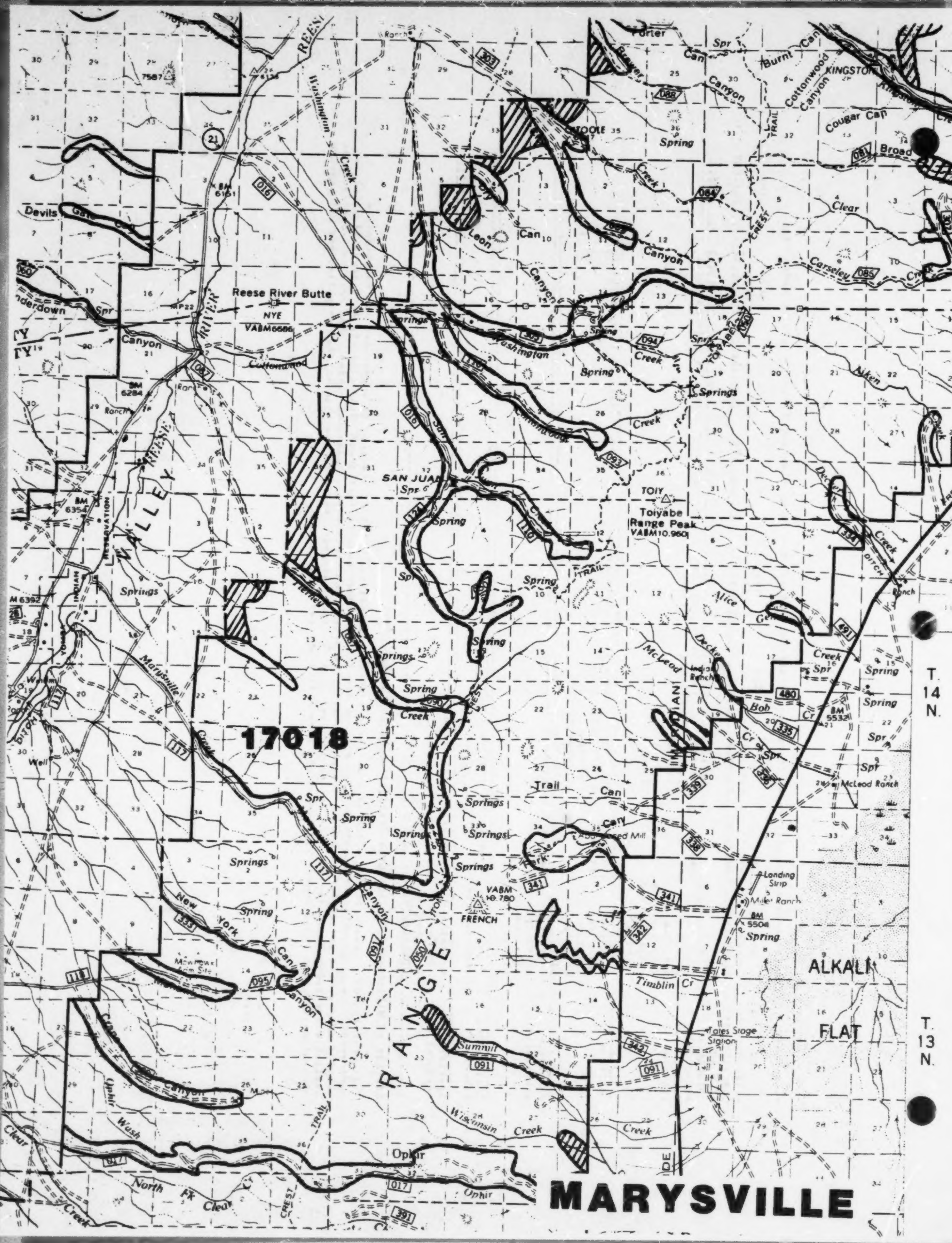
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Toiyabe Range Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	108.3	109.3	0	0	108.3	108.3	108.3
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. wood products Int./Nat. mod. to high	Same as Alt. A	Reduced mining Int./Nat. will be high	Same as Alt. C	Same as Alt. A ---------------->		Same as Alternative C --------->		
Solitude	No change oppr. for solitude will remain high	Same as Alt. A	ORV re- strict will increase solitude to very high	Same as Alt. C	Same as Alt. A -------------->		Same as Alternative C ----------->		
Primitive Recreation	Oppr. for prim. rec. will remain high	Same as Alternative A --->							
Challenging Experience	High opportunities	Same as Alternative A --->							
Special Features	Contains the "wild Granites" a proposed N.N.L.	Same as Alternative A --->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 6640 acres of wildlife habitat improvement and 20 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.


17018
MARYSVILLE
T. 14 N.
T. 13 N.
Reese River Butte
NYE
VABM 6686
REESE RIVER
VALLEY
Devils Gate
Underdown Spr
Canyon
Cottonwood Cr
Washington Creek
Porter Can
Beaver Canyon
Burnt Can
Cottonwood Canyon
KINGSTON
Cougar Can
Broad
Clear
Carseley
TOOLE
Spring
Leon Can
Canyon
Washington Creek
Springs
Spring
Creek
TOIYABE CREST TRAIL
SAN JUAN Spr
TOIY
Toiyabe Range Peak
VABM 10,960
Aiken
Decker
Ditch
Alice
McLeod
Indian Ranch
Bob Cr
McLeod Ranch
BM 5532
Spr
Marysville
Indian
Reservation
BM 6354
BM 6284
BM 6151
M 6392
Well
Springs
Trail Can
Abandoned Mill
VABM 10,780
FRENCH
New York Can
Canyon
RANGE
Landing Strip
Miller Ranch
BM 5504
Spring
ALKALI FLAT
Timblin Cr
Tates Stage Station
Summit
Wisconsin Creek
Creek
Ophir
Ophir Wash
Clear Creek
North Fk Clear Creek
Canyon
TRAIL
CREST
Newpass Mill Site
303
088
081
016
021
086
085
084
062
060
094
093
090
083
316
120
119
117
118
095
091
050
333
341
342
343
336
339
335
480
491
334
017
391
21

Roadless Area Name: Marysville, #17018

Net Acres: 8260

Description

The Marysville roadless area is located between Tierney Creek and Marysville Canyon on the west slope of the Toiyabe Mountain Range, approximately 25 miles south of Austin, Nevada. It is similar in appearance to much of the Toiyabe Range, with broad slopes, steep canyons and gentle foothills.

Topography is relatively gentle, extending from the rolling foothills to the broad canyons which terminate at the Toiyabe Summit. Elevation ranges from approximately 7,000 to 10,000 feet.

Access to the area is limited to unimproved dirt roads which surround it. The area lies within the Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem (3130-021). Vegetation varies from big sagebrush-grass type on the alluvial fans through the pinyon/juniper and mountain mahogany types extending upward into isolated stands of aspen surrounded by mountain big sagebrush.

Some mineralizaion occurs but development and exploration activities have been minimal.

Recreation use is limited primarily to fall deer and sage grouse hunting seasons. Occasional fishing oriented recreation visits occur during the summer months. Overall recreation use is light estimated at 200 RVD's annually.

Small portions of two grazing allotments are within the area. Both allotments are used by cattle during the summer months, basically mid-June to mid-October.

Lahontan cutthroat trout, a federally listed threatened species, occurs in both Tierney and Marysville Creeks which border the area to the north and south.

The area is within a proposed supersonic operating area for military aircraft, and is subjected to sonic booms on occasion.

Capability

There are no good topographic features to provide a more definable boundary for a potential wilderness. Manageability problems might occur in many parts of the area, however the western Forest Boundary is fenced.

The natural integrity and appearance of the area has not been degraded significantly by man's activities.

Opportunities for solitude are low because of the size of the area, and limited vegetative and topographic screening. Opportunities for primitive recreation and challenging experiences are poor for the same reasons.

No unique ecosystems or special geological or cultural features are known to exist in the area. Lahontan cutthroat trout occur near the boundary of the area.

Availability

Recreation use is primarily on the periphery of the area. Light use is made of the area for upland game bird and deer hunting in the fall. Opportunities to increase developed or dispersed recreation are minimal.

Wildlife populations and numbers of species are low due to lack of water and habitat diversity. Potential for improved big game winter range, through manipulation and intensive management of pinyon-juniper is fair.

There is limited potential to increase timber products in the area. Areas with suitable trees for cordwood or posts are generally on terrain to steep to be harvested economically.

Water is sparse throughout much of the area. There does not appear to be a potential to increase water supplies.

The area is grazed by cattle during the summer and fall. Range conditions are fair to good and forage production is modertate to low. Several structural range improvements, both fences and spring developments, occur on the area. There does not appear to be a need to construct any additional improvements. A crested wheatgrass seeding is near the northwest corner of the area (see map). Some potential for vegetative manipulation to increase livestock forage exists but would probably be uneconomical.

Mineralization is believed to be rather isolated as evidenced by occasional mining scars. Potential exists for future mining activities.

Historical occurrence of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest Status.

Lithic scatters and rock ring complexes have been recorded in the area. Archaeological sensitivity is expected to be moderate.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada, areas 150 miles west and the Las Vegas, Nevada, area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Marysville

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E	Alt. G	Alt. H
Wilderness							8.3		8.3
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		8.3	8.3	8.3		8.3			
Stewardship Wildlife, Range & Dispersed Rec.	8.3								
Market Opportunities (Timber and/or Grazing)					8.3			8.3	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Marysville *

Management Description		A	B	C	D	E	F	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	0	0
Livestock Grazing	AUM	835	784	784	784	872	784	784	872	784
Dispersed Recreation	MRVD	1.3	2.6	2.6	2.6	1.0	2.6	2.6	1.0	2.6
Wildlife	MWFUD	.7	2.1	2.1	2.1	.5	2.1	2.1	.5	2.1
Wildlife Habitat Improvement	Acres	1	63	63	63	1	63	0	1	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

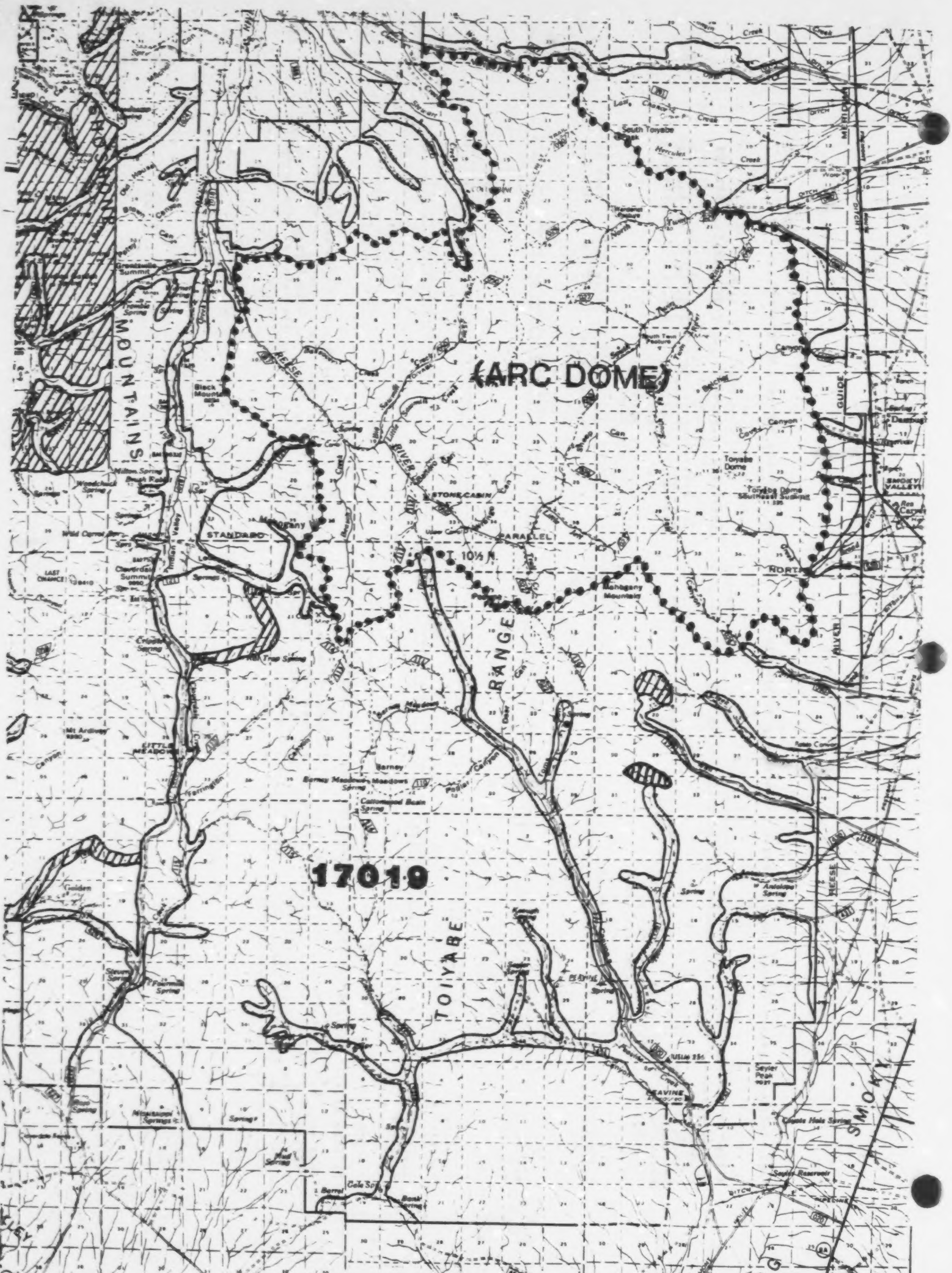
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Marysville

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	0.3	0	0.3
Integrity/ Naturalness (Int./Nat.)	Mining, activity. Int./Nat. will remain mod./high	Wildlife hab. impr. mining Int./Nat. will be mod./high	Same as Alt. B	Same as Alt. B	Same as Alt. A	Same as Alt. B	Reduced mining. Int./Nat. will be high	Same as Alt. A	Same as Alt F
Solitude	Oppr. for solitude will remain low	Same a Alt. A -->					ORV restriction will increase solitude to moderate	Same as Alt. A	Same as Alt F
Primitive Recreation	No change Oppor. for primitive recreation will remain low	Same as Alternative A -->							
Challenging Experience	Limited Opportunities	Same as Alternative A -->							
Special Features	Not represented	Same as Alternative A -->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 630 acres of wildlife habitat improvement is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



SOUTHERN TOIYABE

Roadless Area Name: Southern Toiyabe, #17019

Net Acres: 227115

This narrative describes the entire roadless area acreage for all roadless areas in and adjacent to the Arc Dome Proposed Wilderness. These roadless areas are as follows:

Arc Dome	#04-667
Upper Peavine West	#448 A
Upper Peavine East	#448 B
Illinois Creek	#493
Black Mountain	#494
Mahogany Hill	#495

Description

These roadless areas comprise the southern one-third of the Toiyabe range and lie 45-70 miles north of Tonopah. The entire area is accessible by improved dirt roads from all sides, and lies within three miles of both State Highway 89 and State Highway 376.

The roadless area is distinguished by rugged, high elevation topography heavily dissected by canyons and washes. Primary land types include Maturely Dissected Front Lands, Rugged Front and Mountain Lands, Mountain Uplands and Semi-Arid Foothill Lands. Some Arid Foothill lands lie along the southern boundary, and Glacial Troughs occur along the highest crests. Elevations range from 6,000 feet along the eastern boundary to 11,775 feet at the top of Arc Dome.

A wide variety of vegetative types occur in this area, with the most common being pinyon-juniper woodland and sagebrush communities. Aspen occurs both in riparian and snowbank situations. Groves of limber pine and mountain mahogany occur at the higher elevations. The glacial troughs support plant communities quite different from those commonly found in the Great Basin.

Current uses in this area include livestock grazing, dispersed recreation, woodcutting, and mineral exploration. Livestock grazing is an historic use of the Toiyabe which will continue. Dispersed recreation includes hunting, fishing, hiking and a variety of other primitive activities. A free use green cordwood area was established in Wall Canyon in 1979 to provide fuel wood for the local populace. Commercial cordwood cutting areas have been considered. Mineral exploration has occurred throughout this area, concentrating on the east and north sides. Exploration is continuing today along the entire perimeter of the roadless area. A gold mine exists in the South Twin drainage. Wall Canyon has supported mineral exploration, including drilling and road construction, since 1980 and the impacted area has been deleted from the unit (see map).

This unit is bordered on the east and south by Big Smoky Valley, and on the west and north by roads. The Toiyabe Front presents a dramatic contrast to Big Smoky Valley, as the first peaks rise steeply from the valley floor.

Special features of this area include bighorn sheep, fisheries, streams, spectacular scenery and the Toiyabe Crest Trail.

Capability

An area of less than 5,000 acres has been found to be separated from this roadless unit by a road and has been deleted (see map).

During RARE II the boundaries of this roadless area were scrutinized and it was determined that major management problems could easily occur due to the number and length of the cherry-stemmed roads. Topographic boundaries were drawn for the Arc Dome Proposed Wilderness which would exclude most of the roads and some mining impacts which were not compatible with wilderness use. These boundaries were modified again in 1979 to eliminate roads, cabins, and improve manageability of the boundary through selection of definitive topographic features. The last boundary modification produced the current Arc Dome Proposed Wilderness Area, which has manageable boundaries and excludes all roads and incompatible uses. In addition, management problems will be much less pronounced. Wilderness characteristics would also be enhanced by this boundary modification, and the modified boundary will minimize conflicts with existing mineral activity and minimize the acres of high mineral potential.

The natural integrity of the Southern Toiyabe roadless area is essentially intact with man-made impacts limited to range improvements (fences and water developments) and small, localized mining impacts. Exploration roads have been built in Wall Canyon since 1980, and this area has been excluded from the roadless area. Some old mining scars exist, primarily in the southern portion of the unit and in canyons on the east side, but these scars are generally small and unobtrusive. Some roadwork was done on the north end of the unit. The area was excluded from the Arc Dome Proposed Wilderness by the 1979 boundary modification proposal. Natural ecological systems were greatly impacted by livestock grazing early in this century, but these systems are still intact and present impacts on them are not major.

Most of the unit appears natural, with little overall impact by man's activities. Disturbances are generally localized, and the unit as a whole has a natural appearance with little indication of human occupation.

Due to the rugged terrain, topographic variation is excellent and provides many opportunities for solitude. Vegetation provides screening at the middle elevations where pinyon-juniper woodlands are prevalent and in the mahogany and aspen groves at the higher elevations. Much of the high country is covered with low-growing sagebrush communities which do not provide any screening. Despite the low vegetation and open terrain on top of the peaks, their height alone gives the recreationist a feeling of isolation from the world. Opportunities for primitive recreation include hunting, fishing, camping, hiking, picnicking, birdwatching, horseback riding, rock hunting, ski touring, photography, and sightseeing. Many of these activities depend upon trail access to the interior of the unit, as well as on trailheads with vehicle access. The Trail system within this unit is quite good. The Toiyabe Crest Trail, a National System trail, is maintained annually. Overall, opportunities for primitive recreation within this roadless area are excellent.

This roadless area provides the recreationist with the challenge of hiking or camping in a rugged, remote area, with little shelter available at the highest elevations. Although close to Round Mountain and various ranches, the recreationist must be completely self-sufficient due to the rough terrain and the amount of time it takes to get off the mountain. Hiking can be strenuous, even on trails. High elevation and steep slopes provide challenging experiences, both for long trips and day hikes.

Sensitive wildlife species which occur in this area include the desert bighorn sheep, pika, golden eagle, prairie falcon, ferruginous hawk, goshawk, sharp-shinned hawk, Coopers hawk, screech owl, long-eared owl, short-eared owl, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife.

Two sensitive plant species occur in the Arc Dome area, Draba crassifolia var. nevadensis, and Haplopappus alpinus. In addition, Cymopterus goodrichii has been found in Stewart Creek, outside the Arc Dome Proposed wilderness but inside the southern Toiyabe roadless area. These species were at one time proposed for listing with the U.S. Fish and Wildlife Service as threatened. They do not appear to be threatened by current management practices. They will continue to be managed according to Forest Service policy and applicable Federal laws regarding threatened, endangered and sensitive plant species.

Availability

Dispersed recreation is the major type of recreation use in this roadless area. Fishing and deer hunting are the most popular, but many other types of recreation are available. These forms of recreation usually depend on vehicle access to the interior of the unit. However, due to the trail system in the north, significant use occurs in the Twin Rivers area of the Arc Dome Proposed Wilderness.

The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for disperse recreation will continue to increase. There are no reliable figures showing current recreational use of this roadless area, but estimates using Forest Service and Department of Wildlife figures indicate that the area supports a minimum of 5,000 RVDs annually. A significant portion of that annual use occurs in the Arc Dome Proposed Wilderness, which could support additional recreational use. The roadless area south of Arc Dome could easily support a tremendous increase in use, since current use is considered to be quite low. Recreation management will continue to center on trail maintenance.

This roadless area supports those wildlife species tied to the pinyon-juniper and sagebrush ecosystems, including the sensitive species listed above. In addition, blue grouse occur in the limber pine communities above 9,000 feet. Blue grouse are not common in central Nevada, and are sporadically hunted. Bighorn sheep inhabit the Arc Dome Proposed Wilderness, and may be seen at low elevations during the winter months when forced out of the high country by snow. They are something of an attraction in themselves for wildlife viewing. Continued management of this species may involve future introductions of small groups to enhance the gene pool of the herd, aerial counts and tracking of marked individuals, and restrictions on land uses which could substantially alter important habitat.

Portions of several Forest Service watersheds are included in this area.

Although no systematic survey of watershed condition has been done, over-all condition appears good. There is potential for improvement in some areas. Surface water quality is impacted by domestic livestock, and most water should be boiled before drinking. Distribution of water sources is fair throughout the roadless area, and excellent in the Arc Dome Proposed Wilderness, where many streams and springs provide water in both sufficient quantity and quality for human use.

The Southern Toiyabe roadless area contains portions of five different Forest Service livestock allotments permitted to two operators. Cattle graze up to 4200 AUMs annually. Most livestock use is during the summer and fall, June to October, but the southern portion is grazed November through June. Range improvements include fences and water developments which require annual inspection and maintenance. Many of these are accessible by good trails. Domestic livestock have grazed the Toiyabes since at least 1860 and will continue to do so under approved Allotment Management Plans.

The southern Toiyabe roadless area is located in the Intermountain Sagebrush Ecoregion (3130-021), and contains both the Juniper-pinyon woodland and the Great Basin sagebrush ecosystems. A number of different habitat types occur here. Groves of limber pine and mountain mahogany occur at higher elevations, interspersed with low sagebrush communities. Aspen is found both along streams and in drier sites on high slopes. Riparian habitat is represented by streamside vegetation dominated by willow, cottonwood, water birch or aspen, and by meadows and seep areas. Since riparian habitat represents only .1% of all the lands in Nevada, maintenance of these areas is a priority and will continue as such. Some sub-alpine plant communities are found in the glacial troughs at the highest elevations. These communities are quite rare in central Nevada, and their maintenance is important. The diverse flora and its associated wildlife makes this roadless area, and the Arc Dome Proposed Wilderness in particular, unique in many ways.

The Toiyabe range is contained within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

Pinyon pine was harvested from this area for use in the nearby mines during the early 1900's, but total harvest was not significant. No commercial grade timber exists within the roadless area. A free use pinyon-juniper cordwood area in Wall Canyon is used heavily by residents of Round Mountain and Manhattan. Commercial cordwood areas have been proposed, but no sales have been contracted. Some illegal woodcutting has occurred in Boyd and Antelope Canyons. Future timber management will probably center on maintenance of the present cordwood area with further plans for other areas dependent on the roadless area's future status under the roadless area review.

This roadless area can be broken into three distinct parts according to geologic factors and mineral potential. The very northern portion, from North Twin River to the boundary, is an area of Paleozoic Sediments and granitic intursives with both shear and normal faulting. It has high potential for gold in both vein and disseminated forms. The southeastern portion of the unit, bordered by Broad Canyon and Peavine Canyon, is a completely faulted area of Paleozoic Sediments and Tertiary volcanics. It has high potential for disseminated gold and vein deposits of gold and silver. The rest of the roadless area including much of the Arc Dome area is contained within a volcanic caldera. It is characterized by welded tertiary tuffs and basalts over Permian volcanics. Faulting occurs on a workings, and has moderate potential for disseminated gold.

Mineral exploration has occurred throughout this roadless area since at least 1880. Ore was brought out of several canyons early in this century. A small mine showing economic values of gold and silver exists in South Twin River. Current exploration efforts are concentrated in several canyons on the east and southeast sides of the unit.

Cultural resources include both prehistoric of historic sites. Most historic sites within this area are associated with early mineral exploration and development, and are of local interest. Extensive lithic scatters and rock ring complexes have been recorded throughout the area. Archaeological sensitivity is suspected to be moderate to high.

It is unlikely that any portion of the roadless area will be required for utility corridors or electronic sites. However, a Forest Service repeater is located on one of the peaks south of the proposed wilderness, and it is unlikely that it will be removed. Maintenance on the repeater is performed annually by helicopter. If this method of transportation is prohibited, the annual maintenance will become much more difficult and expensive.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge averages 13,000 RVD's per year and the Hoover has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada, areas 150 miles west and the Las Vegas, Nevada, area 250 miles to the south.

The Arc Dome Proposed Wilderness has generated a great deal of interest by both proponents and opponents. A great deal of support arose for its inclusion within the national wilderness sytems due to its size, location, suitability and special features. Mining interests have been outspoken against its includion due to the mineral potential of the area. Recent comments from the mining industry cite the substantial previous mineral activity, excellent prospects, and the area's high potential for gold, as well as potential for several other minerals, including antimony, molybdenum and silver.

The primary ecosystem type represented in the southern Toiyabe roadless area is common throughout othr parts of Nevada, and is probably not needed to represent specific ecosystem types within the wilderness system. The more unusual systems of the Arc Dome Proposed Wilderness such as the glacial troughs are more suited to inclusion within the national system and would better represent the variety of ecosystems found in central Nevada.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Southern Toiyabe (Incl. Arc Dome)

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness	94.4		94.4		94.4	94.4	227.1	227.1	227.1
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		227.1	132.7	227.1		132.7			
Stewardship Wildlife, Range & Dispersed Rec.	132.7								
Market Opportunities (Timber and/or Grazing)					132.7				
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Southern Toiyabe (less Arc Dome)*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	7	7	7	7	12	7	0	0	0
Livestock Grazing	AUM	3681	3098	3098	3098	3681	3098	3098	3098	3098
Dispersed Recreation	MRVD	21.3	41.1	41.1	41.1	15.9	41.1	41.1	41.1	41.1
Wildlife	MWFUD	11.8	30.2	30.2	30.2	9.3	30.2	30.2	30.2	30.2
Wildlife Habitat Improvement	Acres	199	339	339	339	0	339	0	0	0
Fuel Management	Acres	0	29	29	29	37	29	0	0	0
Mineral Potential	H/M/L	Mod./ High	Mod./ High	Mod./ High	Mod./ High	Mod./ High	Mod./ High	Mod./ High	Mod./ High	Mod./ High

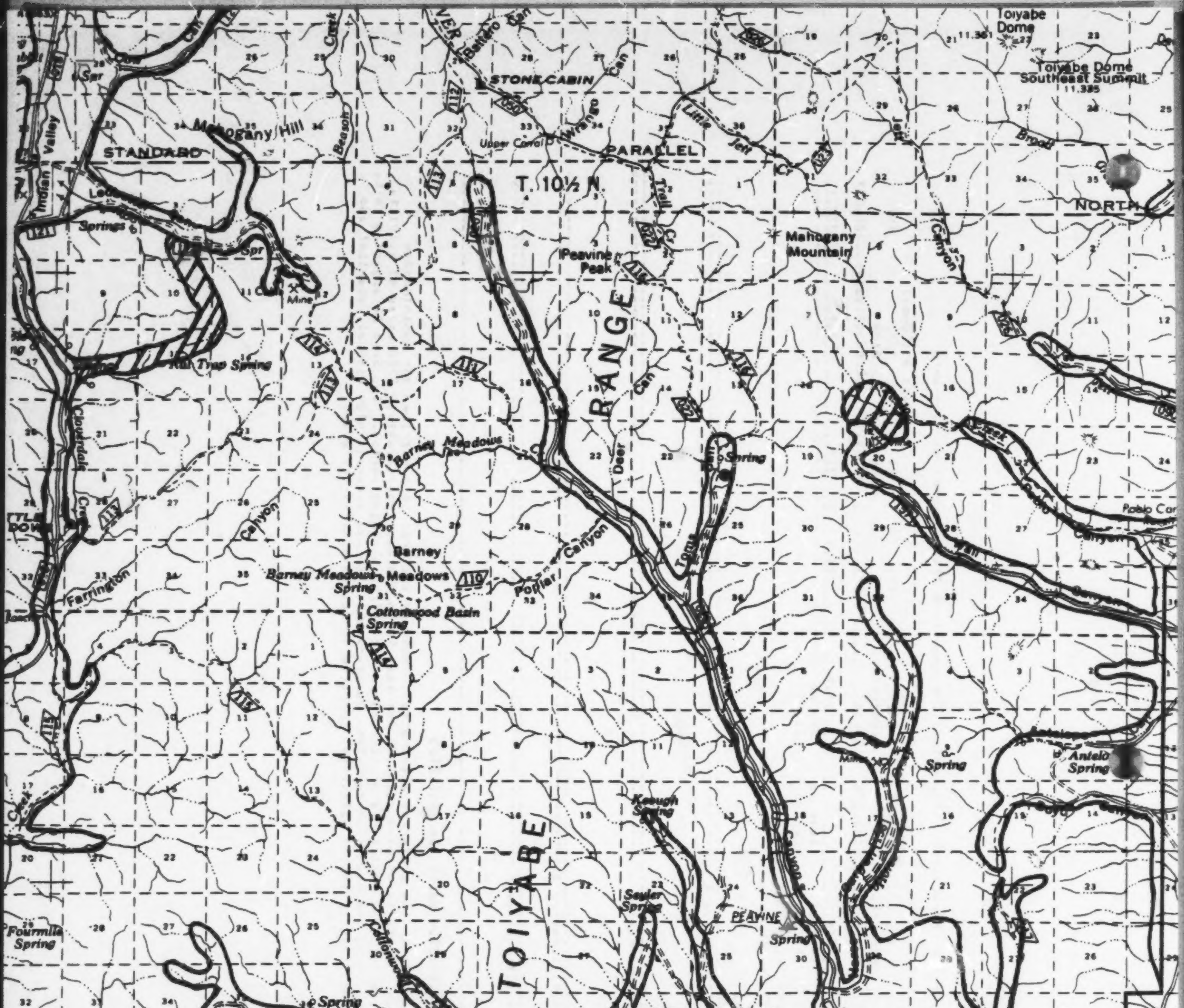
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Southern Toiyabe (Includes Arc Dome)

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	24.6	0	24.6	0	24.6	24.6	227.1	227.1	227.1
Integrity/ Naturalness (Int./Nat.)	Reduced mineral activity Int./Nat. will remain high	Mining, Wildlife hab. impr. wood products Int./Nat. mod./high	Same as Alt. A	Same as Alt. B	Same as Alt. A	→			
Solitude	No change oppr. for solitude will remain high	Same as Alternative A →							
Primitive Recreation	No change. The oppor. for prim. rec. will remain excellent	Same as Alternative A →							
Challenging Experience	Good opportunity	Same as Alternative A →							
Special Features	Several sensitive plant/ animal species present	Same as Alternative A →							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 3390 acres of wildlife habitat improvement and 70 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate/high mineral potential and unscheduled mineral development would most likely impact wilderness characteristics on some of the area.


BANK SPRINGS
17024
TOIYABE
RANGE
T. 10½ N.
STANDARD
PARALLEL
NORTH
STONE CABIN
Mahogany Hill
Mahogany Mountain
Toiyabe Dome
11,361
Toiyabe Dome Southeast Summit
11,335
Peavine Peak
Upper Corral
Wrangle Can
Little Jett Cr
Jett Canyon
Broad
Beason
Indian Valley
Springs
Spr
Mine
Rat Trap Spring
Cloverdale Cr
Farrington
Barney Meadows
Barney Meadows Spring
Cottonwood Basin Spring
Poplar Canyon
Canyon
Deer Can
Toms Can
Spring
Keough Spring
Seyler Spring
PEAVINE Spring
Peavine Canyon
Peavine Creek
PEAVINE (Abandoned)
Ranch
USLM 256
Seyler Peak 7937
Antelo Spring
Pablo Cor
Canyon
Coyote Hole
Seyler Reservo
DITCH
ROUTE
Fourmile Spring
Mississippi Springs
Springs
Mud Spring
Barrel
Cole Spr
Bank Spring
Spr
376
R 40 E
R 41 E
R 42 E

Roadless Area Name: Bank Springs, #17024

Net Acres: 17024

Description

The Bank Springs roadless area lies in the very southern end of the Toiyabe range, approximately 40 miles north of Tonopah. The area is accessible by improved dirt roads on two sides, and lies within 4 miles of State Highway 376.

This area is characterized by low to mid-elevation rolling hills and sagebrush basins. It is comprised of the Arid Alluvial Fan and Arid Foothill land types. Elevations range from 5,700 feet along the southeastern border to 7,500 feet on the highest northern hills.

The primary vegetative type in this area is sagebrush, with communities dominated by either low or big sagebrush. Some scattered pinyon-juniper woodland occurs in the higher elevations, but these communities are not common or large in size.

Current uses of this area include grazing and mineral exploration. Livestock grazing is an historic use which will be continued. Mineral exploration involves primarily prospecting at this time, although active exploration involving drilling and road construction is occurring nearby. Recreation use of the area is almost nil, less than 50 RVD's annually.

This area is bordered by Big Smoky Valley on the south and east, and by similar country on the north and west which is separated from the unit by improved dirt roads.

There are no special features in this roadless area.

Capability

The Bank Springs unit is bordered on the north and west by definable roads. The east and south boundaries consist of National Forest/Bureau of Land Management (BLM) boundaries which are not easily recognized, even where marked. Some management problems could occur along these boundaries; however, there are no important topographical features which could better serve as boundaries. Wilderness characteristics will not be enhanced by boundary changes, and there are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of this area remains intact with no man-made facilities. The area is very natural in appearance, with little indication of man's presence.

Topographic variation is limited to the northern portion. Topography does not provide significant screening. Vegetation is too low-growing to provide screening except in the pinyon-juniper woodlands at higher elevations. Overall, opportunities for solitude are very limited. Opportunities for recreation are limited by the monotonous topography and lack of vegetative cover and diversity. The only form of recreation practiced in this area is upland game bird hunting, and that use is dependent on the boundary roads. Few people find any attraction in this unit for recreational use.

This area could provide a recreationist with the challenge of hiking or camping in a remote environment. The hiker must be completely self-sufficient due to the lack of potable water and the distance from services and medical help. However, challenge is limited by the relatively gentle topographic relief.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, and possibly the great-horned owl and ferruginous hawk. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No threatened, endangered or sensitive plant species are known to occur here.

No unique ecosystems or special geological features are known to exist in this area.

Availability

This area does not presently support recreational use due to its arid nature and lack of notable features. Some hunting may occur along the west boundary, but use is slight. The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. This unit could certainly support an increase in use; however, present indications are that it will continue to receive only slight use.

This area supports those wildlife species tied to the sagebrush and pinyon juniper vegetative communities, including the sensitive species listed earlier.

This unit is contained within a single Forest Service watershed. No systematic survey of watershed conditions has been made. Overall condition appears to be good. Surface water quality is impacted by livestock use. Distribution of water sources is poor.

Bank Springs is contained within one livestock allotment administered by the Forest Service. Cattle graze the area from November through June. Approximately 100 AUMs are grazed by one operator. The area has been grazed by domestic livestock since at least 1890.

This roadless area is part of the Intermountain Sagebrush ecosystem (3130-021) and contains primarily the Great Basin sagebrush ecosystem. Some pinyon-juniper woodland types occur at the highest elevations, but they are small in extent. Riparian habitat is limited to small springs and seep areas. Since riparian habitat represents only .1% of all the lands in Nevada, maintenance of these areas is a priority and will continue to be such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area. No commercial cordwood cuts are anticipated for the future.

This unit is comprised of Tertiary volcanics, with welded tuffs and rhyolites common. Potential for mineral development is low. Some gold and silver could occur as disseminated or vein deposits, but there are no indications that such deposits exist. Exploration has been limited to prospecting, and no active drilling has occurred.

No archaeological survey has been conducted in this area and there are no known significant cultural resources. However, by extrapolation from surrounding areas, this unit is expected to have low to moderate sensitivity.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

There is presently no burning plan for this area, and no fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately owned lands contained within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Bank Springs. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wildenress during the RARE I and central Nevada land use planning effort. The Bank Springs area was not reevaluated during RARE II.

The primary ecosystem type represented in the Bank Springs roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Bank Springs

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							17.0		17.0
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		17.0	17.0	17.0		17.0		17.0	
Stewardship Wildlife, Range & Dispersed Rec.	17.0				17.0				
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Bank Springs*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	0	0
Livestock Grazing	AUM	423	400	400	400	400	400	400	400	400
Dispersed Recreation	MRVD	2.7	5.5	5.5	5.5	2.2	5.5	5.5	5.5	5.5
Wildlife	MWFUD	1.5	3.9	3.9	3.9	1.6	3.9	3.9	3.9	3.9
Wildlife Habitat Improvement	Acres	15	23	23	23	15	23	0	23	0
Fuel Management	Acres	0	5	5	5	0	5	0	1	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

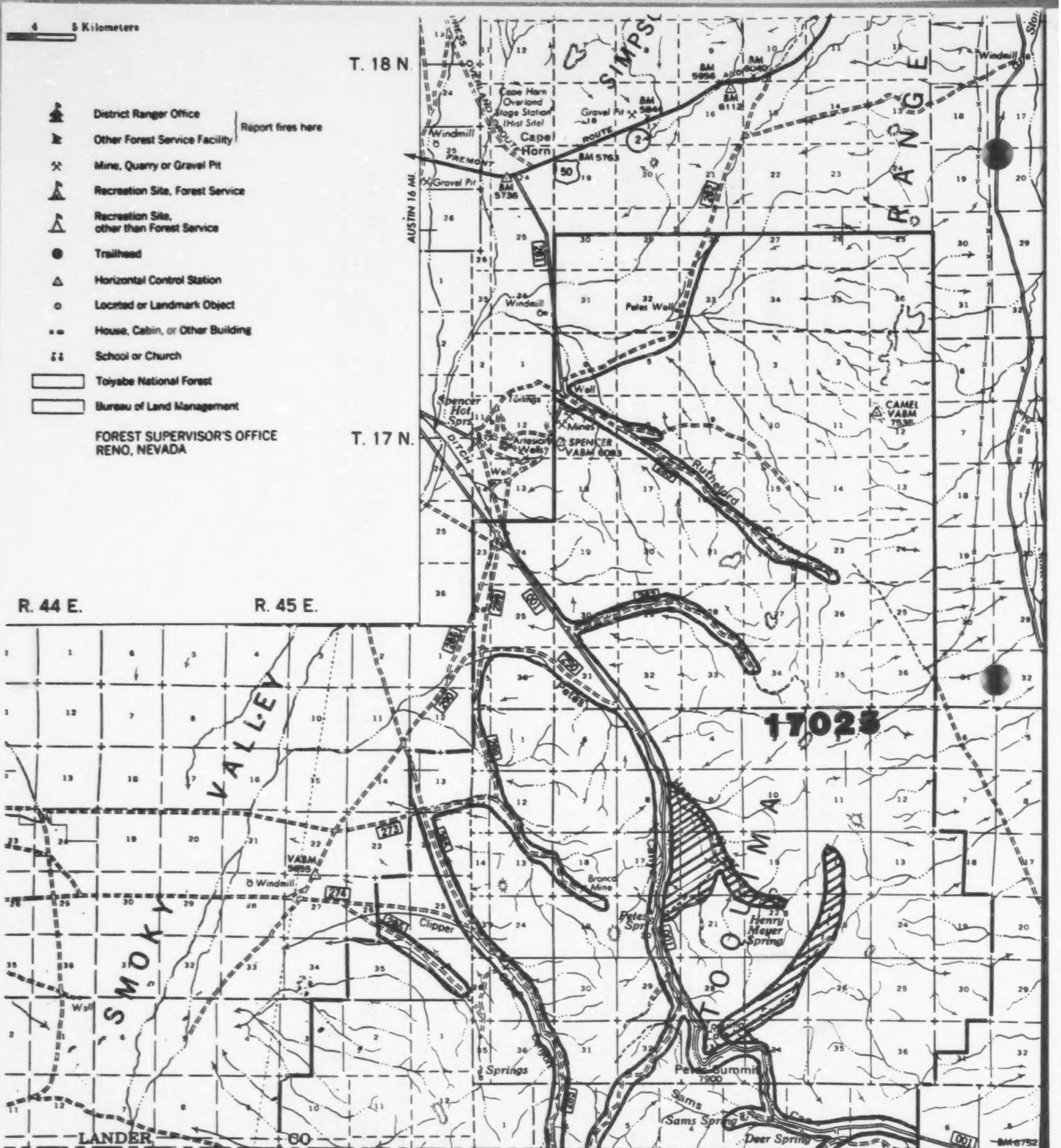
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Bank Springs

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	17.0	0	17.0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. wood products Int/Nat. mod./ high	Same as Alt. A ---->					Reduced mining Int./Nat. will increase to high	Same as Alt. A	Same as Alt. F
Solitude	No change The oppor. for solitude will remain moderate	Same as Alt. A ---->					ORV re- striction will increase solitude to mod./high	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change The opport. for prim. rec. will remain low	Same as Alternative A ---->							
Challenging Experience	Very limited opportunity	Same as Alternative A ---->							
Special Features	Not represented	Same as Alternative A ---->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 230 acres of wildlife habitat improvement is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



TOQUIMA CAVE

Roadless Area Name: Toquima Cave, #17025

Net Acres: 42605

Description

The Toquima Cave roadless area is on the northern end of the Toquima Mountain Range approximately 25 miles southeast of Austin, Nevada. The area is a low, level finger of hills extending out from the end of a mountain range.

There are no mountain peaks within the area, but there are several small rough canyons on each side of a central ridge that tapers down to the valley floor. The topography in most areas other than these canyons is rather gentle.

Access to the area is by a paved highway, Highway 50, which runs within one mile of the northwest corner. From this highway, several unimproved dirt roads access the area. The south boundary of the area is an improved dirt road. Several constructed roads protrude into the interior of the area and some sub-standard "jeep" roads cross it.

The area lies within the Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem (3130-021). Vegetation in the canyons is primarily characterized by mature stands of pinyon-juniper, interspersed with islands of big sagebrush and mountain mahogany. Extending down from the foothills, vegetation changes from a big sagebrush habitat type into a salt desert shrub community with shad scale and spiny hopsage being the common shrub species.

Some mineralization occurs within the area. Evidence of past and present mining operations exists especially in the southern part of the area (see map).

Recreation use is moderate, the majority of it associated with visits to the Toquima Cave Archeological site. Some deer and sage grouse hunting occurs in the fall. An estimated 500 RVD's of use occurs in the area.

Portions of two grazing allotments for cattle fall within this roadless area. Both allotments are for winter use from the first of December to the end of March on one and the end of May on the other. Lack of water and snow depths restricts most use to the foothill regions.

A territory for wild burros exists on the western half of the area. Approximately 15 burros use the area during the spring, summer and fall.

Capability

There are no strong topographic features to provide a more definable boundary for a potential wilderness. Manageability problems might occur along the unfenced Forest Boundary and the intrusive roads.

The natural integrity and appearance of the area has not been degraded significantly by man's activities except in the vicinity of the recent mineral exploration activities.

Opportunities for solitude are quite high in the most of the area. Its large size, lack of human activity and distances from the center to the perimeter all contribute to a feeling of solitude. Opportunities for primitive recreation and challenging experiences are limited due to the lack of trails and gentle topography.

No unique ecosystems or special features are known to exist in the area. Toquima Cave with its prehistoric pictographs is a special cultural feature.

Availability

Recreation use is primarily on the periphery of the area and is generally associated with recreational activities tied to Toquima Cave. Light use is made of the area for upland game bird and deer hunting in the fall. Opportunities to increase developed or dispersed recreation are limited.

Besides Toquima Cave, prehistoric lithic scatters and rock ring complexes have been recorded in the unit. Because of environmental similarity with other areas where cultural resource sensitivity is known to be moderate to high, it is expected that moderately dense artifact assemblages occur throughout this unit.

Wildlife populations are fairly low due to poor water supplies and habitat diversity. A unique species occuring in this area is pronghorn antelope. Potential for improving wildlife habitat is moderate, with water being the limiting factor.

There is limited potential to increase timber outputs in the area. Some small commercial Christmas tree sales could be let. Areas with trees suitable for cordwood or posts generally have terrain too steep to be harvested economically.

Water is in short supply within the area. Potential for developing additional water does not appear to be good.

The area is grazed by cattle during the winter and spring. Range conditions are fair to good, while forage production is low due to light precipitation.

Very few range improvements occur in the area and there does not appear to be an opportunity for additional developments. Vegetative type conversion potential is minimal and would be unadvisable if water could not be developed at the same time.

In the vicinities of the most recent mineral exploration activities, potential for additional exploration and development is high.

Historical occurrence of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Toquima Cave

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							42.6		42.6
Minimum Level (Custodial)					42.6				
Intensive Wildlife & Dispersed Rec.		42.6	42.6			42.6			
Stewardship Wildlife, Range & Dispersed Rec.	42.6			42.6				42.6	
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Toquima Cave*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	2	2	2	2	2	0	2	0
Livestock Grazing	AUM	798	742	742	798	768	742	768	798	768
Dispersed Recreation	MRVD	1.9	1.9	1.9	1.9	1.7	1.9	1.6	1.9	1.9
Wildlife	MWFUD	.6	1.1	1.1	.6	.6	1.1	1.1	.6	1.1
Wildlife Habitat Improvement	Acres	0	22	22	0	0	22	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

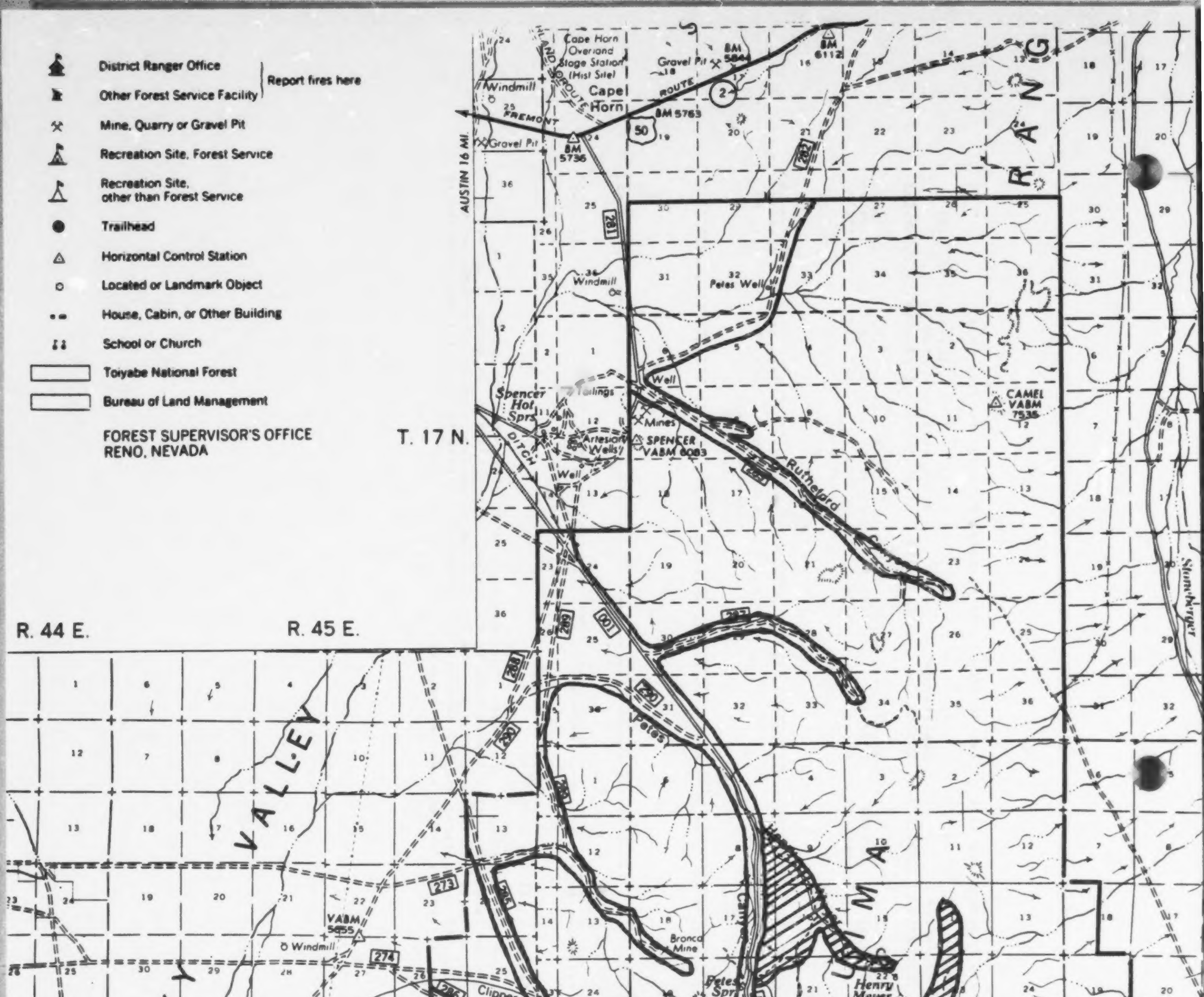
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Toquima Cave

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	42.6	0	42.6
Integrity/ Naturalness (Int./Nat.)	Mining, & wood products Int./Nat. will stay moderate	Mining wildlife hab. impr. wood products Int./Nat. moderate	Same as Alt. B	Same as Alt. A	Same as Alt. A	Same as Alt. B	Reduced mining Int./Nat. will be mod./high	Same as Alt. A	Same as Alt. F
Solitude	No change oppr. for solitude will remain mod./high	Same as Alt. A ---->					ORV restriction will increase solitude to high	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change. Oppor. for prim. rec. will remain low	Same as Alternative A ---->							
Challenging Experience	Limited opportunity	Same as Alternative A ---->							
Special Features	Toquima Cave of cultural interest	Same as Alternative A ---->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 220 acres of wildlife habitat improvement and 20 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.


District Ranger Office
Other Forest Service Facility
Report fires here
Mine, Quarry or Gravel Pit
Recreation Site, Forest Service
Recreation Site, other than Forest Service
Trailhead
Horizontal Control Station
Located or Landmark Object
House, Cabin, or Other Building
School or Church
Toiyabe National Forest
Bureau of Land Management
FOREST SUPERVISOR'S OFFICE
RENO, NEVADA
T. 17 N.
R. 44 E.
R. 45 E.
BIG SMOKY VALLEY
TOQUIMA RANGE
17026
CLIPPER GAP
Cape Horn
Cape Horn Overland Stage Station (Hist Site)
FREMONT ROUTE
AUSTIN 16 MI.
Spencer Hot Sprs
SPENCER VABM 6083
CAMEL VABM 7535
Petes Well
Rutherford
Bronco Mine
Petes Spr
Henry Meyer Spring
Petes Summit 7900
Sams Spring
Deer Spring
Clipper Gap Spring
CLIPPER GAP VABM 6834
Turquoise Spring
Sage Hen Spring
The Monitor
The Homestead
Mud Spring
LANDER
NYE
Clipper
Windmill
Artesian Wells
Tailings
Mines
Gravel Pit
Springs
Boulder

Roadless Area Name: Clipper Gap, #17026

Net Acres: 10480

Description

The Clipper Gap roadless area is located along the west facing slopes of the Toquima Range, approximately 25 miles southeast of Austin, Nevada.

Topography is characterized by steep, rough breaking canyons extending into gentle rolling foothills. Elevations range from 7,000 to 8,500 feet.

The area is accessible by an improved dirt road forming the northern boundary and unimproved dirt roads bordering all other sides, which protrude into the interior. There are numerous "jeep" trails traversing the area.

The area lies within the Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem (3130-021). Vegetation consists of pinyon/juniper and mountain mahogany along the ridges and slopes, and big sagebrush communities in the canyon bottoms.

The area is moderately mineralized with numerous exploration roads and surface scars in existence.

Recreation use is primarily limited to fall deer and sage grouse hunting seasons, with occasional visits from "Rockhounds". An estimated 200 RVD's use occurs.

Livestock grazing is a minor activity in the area which includes a small protion of winter grazing allotment. Because of rugged terrain, lack of water, and low forage production, there is very little use by cattle.

A minor portion of a territory for wild burros falls within the area. From five to eight burros use the area during the spring, summer and fall.

Capability

There are no strong topographic features to provide a more definable boundary for a potential wilderness. Manageability problems might occur along the unfenced Forest Boundary and from the road corridor leading to the Branco Mine, which almost cuts the area in half.

The natural integrity and appearance of the area has not been degraded significantly by man's activities except in the vicinity of the recent mineral exploration activity.

Although the area is relatively small in size, opportunities for solitude are moderate, due to good topographic and vegetative screening, and a lack of visitors. Opportunities for primitive recreation and challenging experiences are moderate particularly in the more rugged areas. Primitive recreational opportunities are limited slightly by the lack of trails and water.

No unique ecosystems or special geological features are known to exist in the area.

Availability

Recreation use is light during the fall deer and sage grouse hunting seasons. During the rest of the year it is almost nonexistent. Opportunities to increase either developed or dispersed recreation are very limited.

Virtually no archeological work has been conducted in this area. However, because of environmental similarity with other areas where cultural resource sensitivity is known to be moderate to high, it is expected that moderately dense artifact assemblages occur throughout the unit.

Wildlife populations are low due to poor water supplies and a lack of habitat diversity. Some pronghorn antelope use occurs at the northern end of the area. Potential for improving wildlife habitat are minimal because of the lack of water.

There is limited potential to increase timber outputs in the area. A small commercial Christmas tree sale could be let. Areas with threes suitable for cordwood or posts generally have terrain too steep to harvested economically.

Water is in short supply in the area, and there does not appear to be any opportunity to increase water at this time.

The area is used by cattle during the winter months. Range condition is fair within the area. There does not appear to be a need or an opportunity to develop additional improvements. Potential for vegetative type conversions is minimal.

Mineral exploration activities have occured over approximately one-third of the roadless area. Mining and exploration activities are expected to continue due to the degree of mineralization.

Historical occurrence of fire has been low although the potential for large brush fire exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Clipper Gap

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							10.5		10.5
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		10.5	10.5			10.5			
Stewardship Wildlife, Range & Dispersed Rec.	10.5				10.5				
Market Opportunities (Timber and/or Grazing)				10.5				10.5	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Clipper Gap*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	325	282	282	332	325	325	282	332	282
Dispersed Recreation	MRVD	.5	.5	.5	.4	.5	.5	.5	.4	.5
Wildlife	MWFUD	.2	.4	.4	.2	.2	.2	.2	.2	.2
Wildlife Habitat Improvement	Acres	0	9	9	0	0	0	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

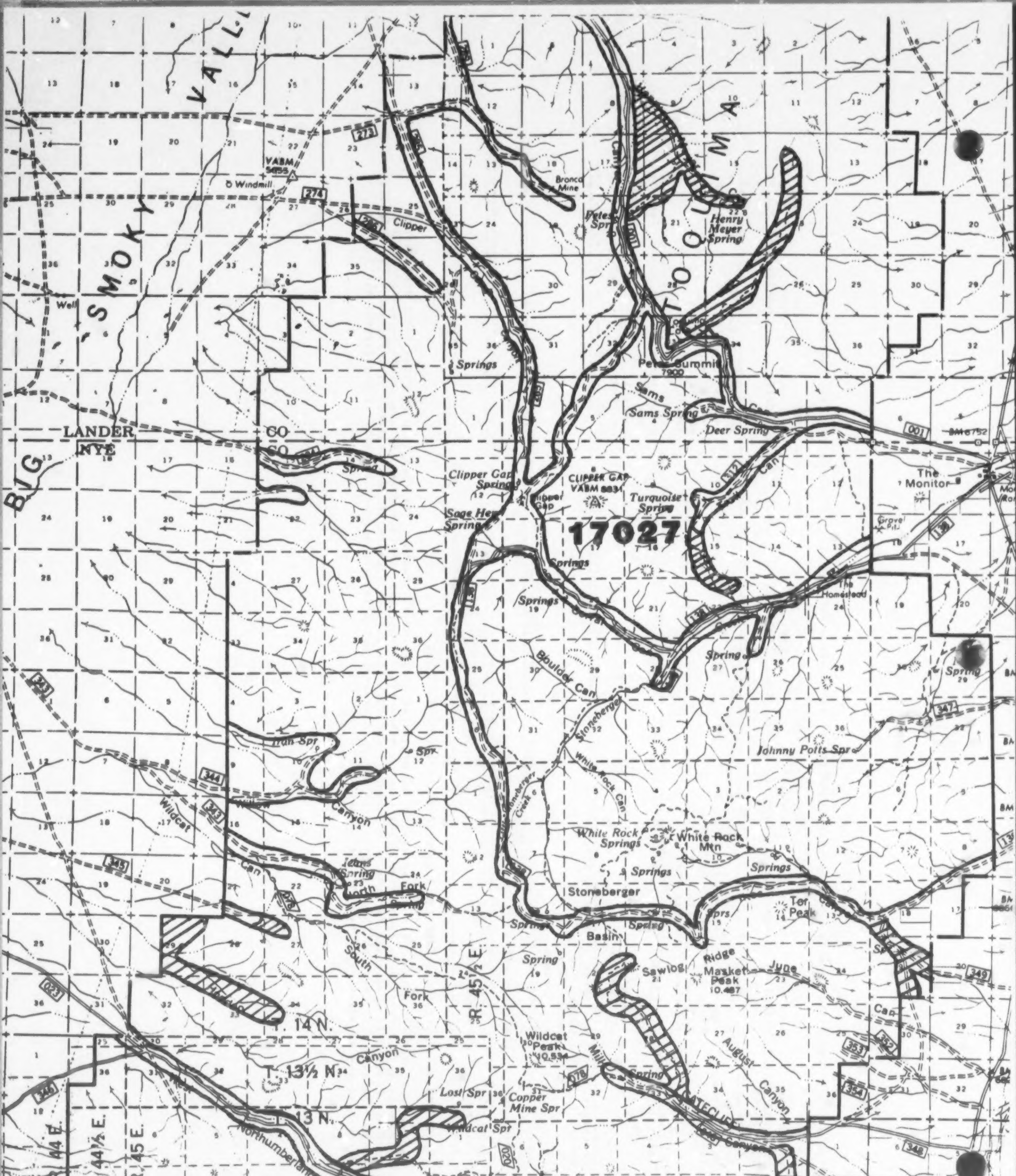
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Clipper Gap

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	10.5	0	10.5
Integrity/ Naturalness (Int./Nat.)	Mining, & wood products Int./Nat. is moderate	Mining, wildlife hab. impr., & wood products Int./Nat. moderate	Same as Alt. B	Same as Alt. A	--->	--->	Reduced mining Int./Nat. will be mod./high	Same as Alt. A	Same as Alt. F
Solitude	No change oppr. for solitude will remain mod./high	Same as Alt. A	--->	--->	--->	--->	ORV restriction will increase solitude to high	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A	--->	--->	--->	--->	--->	--->	--->
Challenging Experience	Moderate opportunities	Same as Alternative A	--->	--->	--->	--->	--->	--->	--->
Special Features	Not represented	Same as Alternative A	--->	--->	--->	--->	--->	--->	--->

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.

17027
BIG SMOKY VALLEY
TOQUIMA
LANDER CO
NYE CO
VABM 5655
Windmill
Well
Clipper
Bronco Mine
Petes Spr
Henry Meyer Spring
Peters Summit 7900
Sams Can
Sams Spring
Deer Spring
Springs
Clipper Gap Spring
Clipper Gap
CLIPPER GAP VABM 8831
Turquoise Spring
Sage Hen Spring
The Monitor
Gravel Pit
BM 6752
The Homestead
Spring
Boulder Can
Stoneberger Creek
White Rock Can
Johnny Potts Spr
Iron Spr
Spr
Wildcat Can
Willow Canyon
Jeans Spring
North Fork
South Fork
White Rock Springs
White Rock Mtn
Stoneberger Basin
Ter Peak
Sprs
Sawlog Ridge
Masket Peak 10,487
June Can
August Canyon
Wildcat Peak 10,534
Mill Cr
Lost Spr
Copper Mine Spr
Wildcat Spr
Northumberland Canyon
North Pass Spr
Canyon
T. 14 N.
T. 13½ N.
T. 13 N.
R. 44 E.
R. 44½ E.
R. 45 E.
R. 45 E.
LAKE

SAM'S CANYON

Roadless Area Name: Sam's Canyon, #17027

Net Acres: 10905

Description

The Sam's Canyon roadless area is located along the east side of the Toquima Mountain Range, including an area from the crest zone to the edge of the Monitor Valley floor. The area is approximately 25 miles southeast of Austin, Nevada.

Topography is undulating, with foothills forming long ridges and small narrow canyons.

The area is accessible by improved dirt roads on the north and south boundaries. Several constructed roads protrude into the interior of the area with one almost cutting the area into two equal parts (see map for new road locations).

The area lies within the Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem (3130-021). Vegetation consists of mature stands of pinyon/juniper and mountain mahogany along the ridges and slopes of the canyons. Canyon bottoms are generally covered by big sagebrush communities. d slopes of the canyons. Canyon bottoms are generally covered by big sagebrush communities. Portions of the area are highly mineralized. Several miles of primitive road and landscape scars bear witness of the efforts to mine the low-grade turquoise and silver deposits.

Recreation use is primarily limited to the fall deer and sage grouse hunting seasons. Some rock hounding activity occurs. An estimated 500 RVD's of use occurs each year.

Livestock grazing is the major activity presently taking place in the area, which includes a small portion of one grazing allotment. Up to 411 cattle are permitted in the allotment during the summer grazing period.

Capability

There are no strong topographic features to provide a more definable boundary for a potential wilderness. The Forest Boundary is fenced on the east side which would provide a physical barrier, but manageability problems might occur along the road corridors bordering the rest of the roadless area and from the intrusive roads.

The natural integrity and appearance of the area has not been degraded significantly by man's activities, except in th vicinity of recent mineral exploration activity. Several range management fences, and water developments, slightly detract from the natural appearance.

Opportunities for solitude are moderate even though the area is small in size. A high degree of topographic and vegetative screening exists, and visitors are rare except during the hunting seasons.

Opportunities for primitive recreation and challenging experiences are about average for central Nevada with a good mix of topography, but no single outstanding feature.

No unique ecosystems or special features are known to exist in the area.

Availability

Recreation use is moderate in this area. Most use occurs during the fall hunting season. Opportunities exists to increase developed and dispersed recreation in the area.

Although virtually no formal archaeological investigation has been conducted in this unit, extensive lithic scatters and rock ring complexes are known to occur. Because of environmental similarity with other areas which are known to have moderate to high sensitivity, it is expected that moderately dense artifact assemblages are present.

Wildlife populations are at moderate levels due to adequate water supplies and acceptable levels of habitat diversity. There is potential for improving habitat by burning sagebrush and manipulating the pinyon/juniper communities.

There is limited potential to increase timber outputs in the area. A small commercial Christmas tree sale could be let.

Water is not overly abundant but is adequate for the present use of the area. Development of additional water, although desirable, is questionable.

The area is used for grazing cattle during the summer months. Range conditions are fair to good with the forage production being moderate. There are several structural fences and water developments. Potential or need to develop additional improvements either structural or non-structural, is minimal.

As evidenced by the current amount of mining and prospecting activity, future mineral exploration is expected.

Historical occurrence of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Sam's Canyon

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							10.9		10.9
Minimum Level (Custodial)					10.9				
Intensive Wildlife & Dispersed Rec.		10.9	10.9	10.9		10.9			
Stewardship Wildlife, Range & Dispersed Rec.	10.9								
Market Opportunities (Timber and/or Grazing)								10.9	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Sam's Canyon*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	1	0
Livestock Grazing	AUM	313	312	312	312	262	312	312	344	312
Dispersed Recreation	MRVD	.5	1.0	1.0	1.0	.4	1.0	1.0	.4	1.0
Wildlife	MWFUD	.2	.8	.8	.8	.2	.8	.8	.2	.8
Wildlife Habitat Improvement	Acres	2	6	6	6	2	6	0	1	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

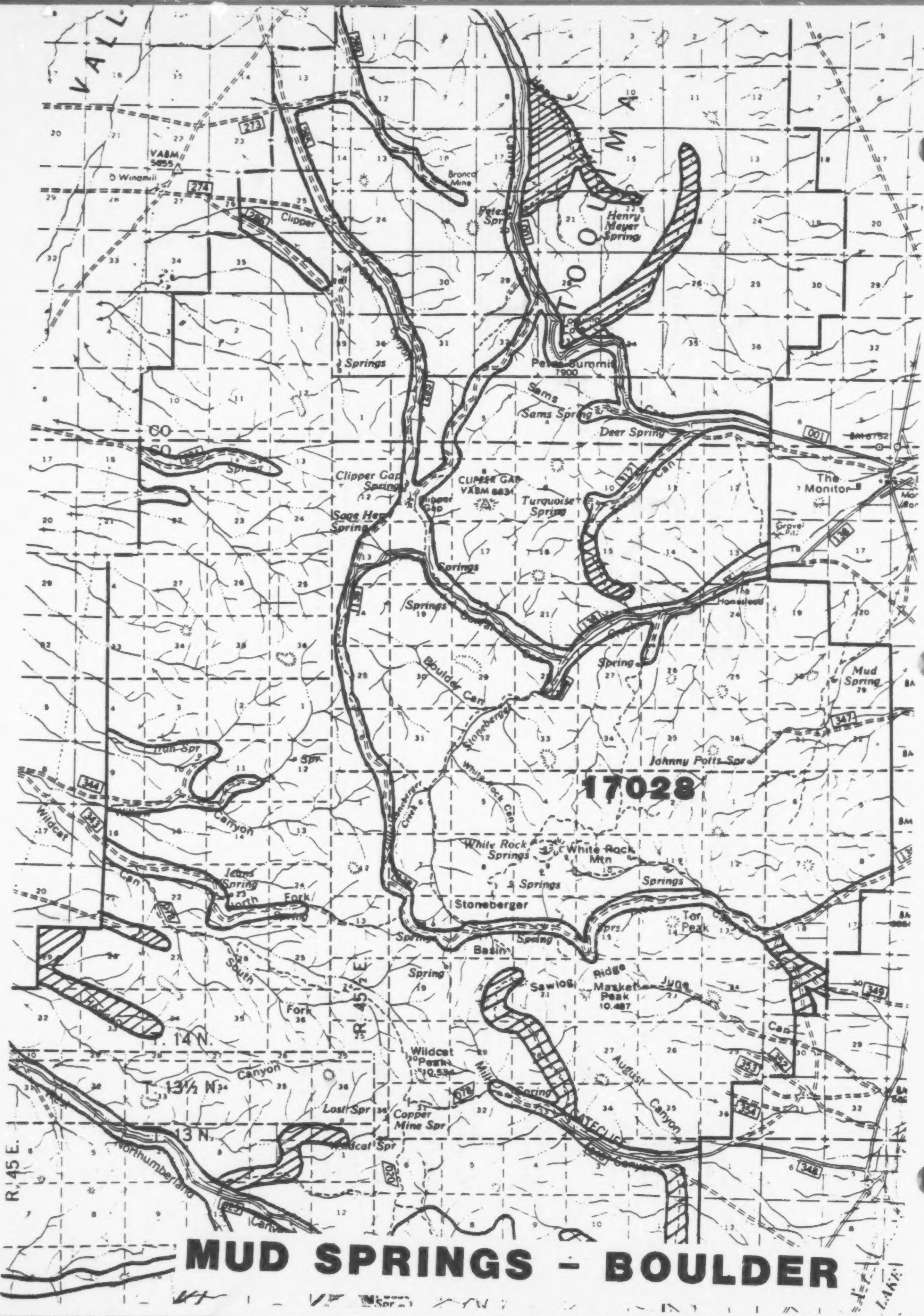
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Sam's Canyon

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	10.2	0	10.2
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. Int/Nat, will remain mod/high	Same as Alt. A					Reduced mining Int./Nat. will be high	Same as Alt. A	Same as Alt. F
Solitude	No change oppr. for solitude will remain moderate	Same as Alt. A					ORV restrictions will increase solitude to mod./high	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain low/mod.	Same as Alternative A							
Challenging Experience	Limited opportunities	Same as Alternative A							
Special Features	Not represented	Same as Alternative A							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 60 acres of wildlife habitat improvement is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



MUD SPRINGS - BOULDER

Roadless Area Name: Mud Springs-Boulder, #17028

Net Acres: 25345

Description

The Mud Springs-Boulder roadless area in the north central part of the Toquima Range is approximately 40 miles southeast of Austin, Nevada. The area is distinguished from its surroundings especially in the upper elevations. These areas have the appearance of an undulating sagebrush and aspen parkland.

Topography is characterized by a small rolling plateau, bisected with small drainages which break rapidly from the perimeter of the pateau into short steep canyons leading to the easterly foothills of the Toquima Mountain Range. Elevations range from approximately 7,000 to 10,000 feet.

Access to the area is from improved dirt roads that border most of the area. Many miles of sub-standard "jeep" trails also traverse the area.

This roadless area lies within the Intermountain Sagebrush/Western Ponderosa Forest ecosystem (3130-010). Vegetation varies with elevation. High elevations have significant aspen stands and mountain big sagebrush/grass communities, as well as some limber pine stands. Along the ridgelines at mid elevations mountain mahogany stands occur. Most mid and lower elevation slopes are covered by pinyon-juniper communities. Some of the alluvial fan and foothill areas at the eastern boundary get into the salt desert shrub community type.

The area is not highly mineralized and minimal exploration activity has taken place.

Recreation use is fairly high for central Nevada, especially during the fall deer and sage grouse hunting seasons. A minor fishery exists in Stoneberger Creek which attracts a few fishermen throughout the year. An estimated 1,500 RVD's of use occurs each year.

A major portion of the Stoneberger grazing allotment is within this area, which is grazed by cattle during the summer months.

Capability

There are no strong topographic features to provide a more definable boundary for a potential wilderness. Manageability problems might occur along the unfenced Forest boundary and from the multitude of "jeep" trails running throughout the area.

The natural integrity and appearance of the area has been degraded significantly by man's activities. Numerous range fences, water developments, and vegetative manipulation projects occur throughout the area.

Opportunities for solitude are quite high in the upper portions of the area. Its large size, high level of topographic screening, and distances from the center to the perimeter all contribute to the chances to enjoy experiences are good for the same reasons.

No unique ecosystems are known to exist in the area. Lahontan cutthroat trout occur near the boundary of the area. The White Rock Mountain geologic formation is unique for central Nevada.

Availability

Recreation use is fairly high in this area. Most use occurs during the fall hunting season. Opportunities to increase both developed and dispersed recreation are above average.

Prehistoric cultural resources are known to exist in this unit although little formal work has been conducted. Environmentally similar to other areas known to have moderate to high sensitivity, it is expected that moderately dense artifact assemblages occur throughout this unit.

Wildlife populations are at moderate to high levels in this area due to good water supplies and habitat diversity. Potential for improving diversity is low, and some work will be needed to maintain the present conditions. Unique wildlife situations occurring in this area are the high numbers of sage grouse and the brown trout in Stoneberger Creek. The area would provide suitable habitat for elk.

There is limited potential to increase timber outputs in the area. A small commercial Christmas tree sale could be let, but areas with suitable trees for cordwood or posts are generally on too steep of terrain to be harvested economically.

Water is abundant and well distributed throughout the area. There does not appear to be a need to develop additional water at this time. Several watershed stabilization structures are in place in the area.

The area's major use is for grazing cattle during the summer. Range conditions are fair to good with the forage production being quite high. There are many miles of fence and several water developments within the area. In the 1960's, over 1,000 acres of sagebrush was sprayed to increase livestock forage. No additional fences are needed. More water could be developed for livestock use. Previously treated acres will need maintenance if high forage production is continued.

Mining impacts have been minimal to date. Potential exists for future mineral development.

Historical occurrence of fire has been low although the potential for large fires exists. The majority of fires have been less than 1/4 acre in size.

All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Western Ponderosa Forest ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Mud Springs-Boulder

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							25.3		25.3
Minimum Level (Custodial)					25.3				
Intensive Wildlife & Dispersed Rec.		25.3	25.3	25.3		25.3			
Stewardship Wildlife, Range & Dispersed Rec.	25.3								
Market Opportunities (Timber and/or Grazing)								25.3	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Mud Springs-Boulder*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	427	422	422	422	378	422	427	458	427
Dispersed Recreation	MRVD	1.1	2.1	2.1	2.1	1.0	2.1	2.1	1.0	2.1
Wildlife	MWFUD	.5	1.7	1.7	1.7	.5	1.7	1.7	.5	1.7
Wildlife Habitat Improvement	Acres	4	11	11	11	3	11	0	3	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

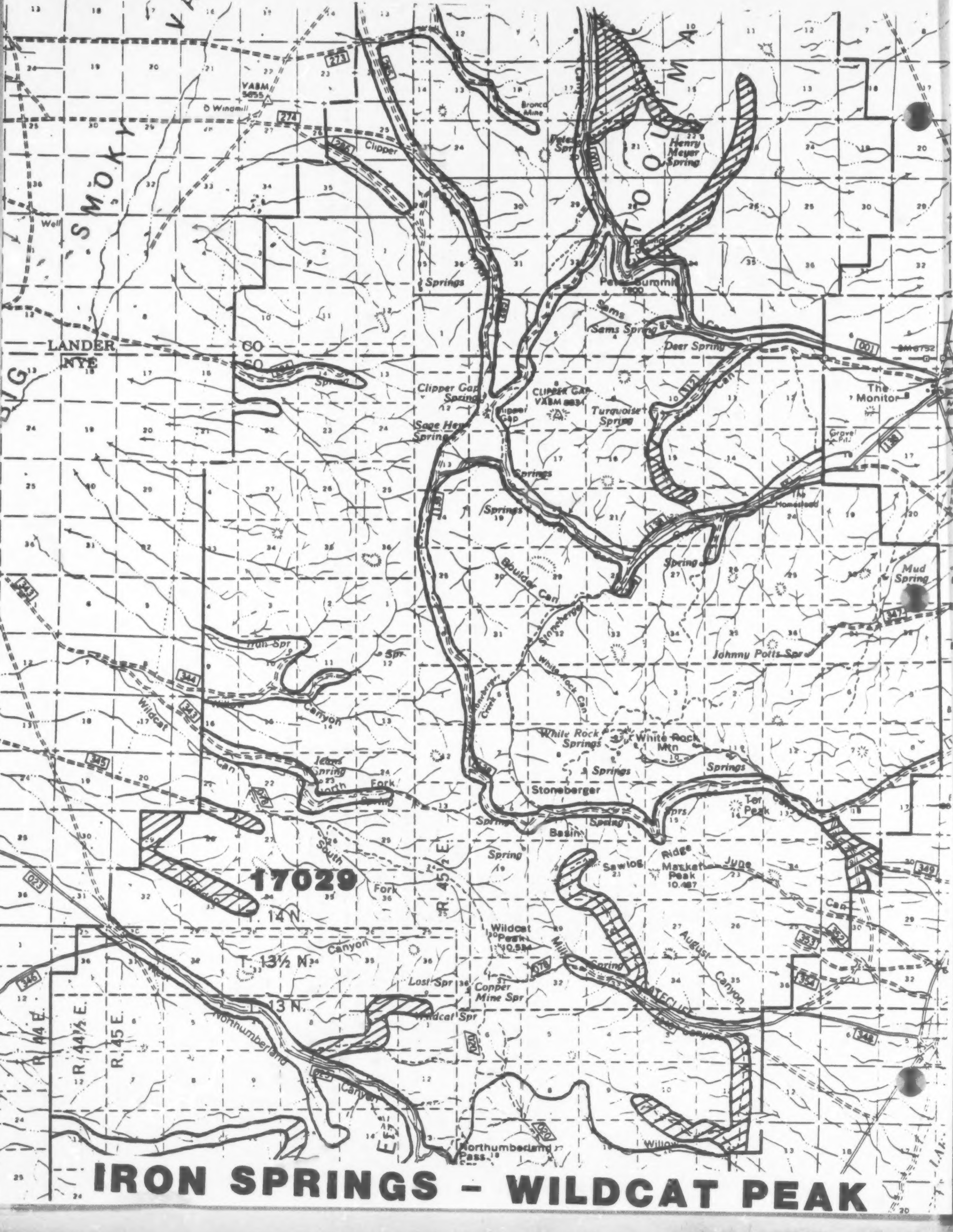
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Mud Springs - Boulder

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	25.3	0	25.3
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. wood products Int./Nat. low	Same as Alt. A --->					Reduced mining Int./Nat. will increase low/mod.	Same as Alt. A	Same as Alt. F
Solitude	No change oppr. for solitude will remain mod./high	Same as Alt. A --->					ORV restrictions will increase solitude to high	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A --->							
Challenging Experience	Mod./high opportunities	Same as Alternative A --->							
Special Features	The White Rock Mt. Geologic formation	Same as Alternative A --->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 110 acres of wildlife habitat improvement and 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



IRON SPRINGS - WILDCAT PEAK

Roadless Area Name: Iron Springs-Wildcat Peak, #17029

Net Acres: 57230

Description

The Iron Springs-Wildcat Peak roadless area lies in the north central part of the Toquima Mountain Range approximately 40 miles south east of Austin, Nevada. It has a rugged, wild appearance. Topography is generally defined by steep canyons and long ridges in the upper elevations, becoming much gentler in the foothills and alluvial fans near the valley floor.

The northern portion of the area is fairly inaccessible except from the improved dirt road forming its eastern boundary. The southern half is accessible by improved dirt roads and the newly constructed mining roads which protrude into the area (see map).

The area lies within the Intermountain Sagebrush/Western Ponderosa Forest ecosystem (3130-010). Vegetation varies from stands of limber pine and mountain mahogany on high elevation ridges to sagebrush and pinyon-juniper covered slopes and salt desert shrub communities on the alluvial fans. A few patches of aspen occur near water sources.

Portions of the area are highly mineralized. One of the largest known barite deposits in the United States occurs in the southern section.

Recreation use is moderate to high for central Nevada (1,000 RVD's) with the majority of this use occurring during the fall hunting seasons.

Livestock grazing is a major use of the area, including portions of four grazing allotments. Two of the allotments are for summer use and two are for winter use.

A wildhorse territory with between 10 and 15 head of horses also lies within the area.

Capability

There are no strong topographic features to provide a more definable boundary for a potential Wilderness. Unfenced Forest Boundaries and the numerous road corridors leading into the area might create manageability problems.

Evidence of man's activities, i.e. mining scars and primitive roads, reduces the area's natural integrity and appearance to below average. Several miles of range management fences and numerous water developments also detract from the area's natural appearance.

Opportunities for solitude are quite high in the area. Its large size, high level of topographic screening, distances from the center to the perimeter all contribute to the chance to enjoy solitude. Opportunities for primitive recreation and challenging experiences are good for the same reasons.

No unique ecosystems or special geological features are known to exist in the area. The Gatecliff archeological site in Mill Canyon and the old saw mill site in Ike's Canyon are special cultural features in the area.

Availability

Recreation use is moderate to high during the fall hunting seasons. Little recreational activity occurs during the remainder of the year. There are few opportunities to increase either dispersed or developed recreation in the area.

Historical sites related to early mining occur in this unit. Recorded prehistoric sites include rock shelters, petroglyphs, rock rings, lithic scatters, and the presence of incised slates. Archaeological sensitivity is moderate to high. Gatecliff Shelter is on the National Register of Historic Places and both it and Triple T Rockshelter have been withdrawn from mineral entry.

Wildlife populations are at moderate levels over most of the area. In areas with better water distribution and habitat diversity their populations can be quite high. There is limited potential to improve habitat.

There is limited potential to increase timber outputs in the area. Some small commercial Christmas tree sales could be let. Areas with suitable trees for cordwood or posts are generally on too steep of terrain to be harvested economically.

Water generally is abundant, but is not well distributed throughout the area. There does not appear to be much opportunity to develop additional water at this time.

The area is used for grazing cattle during both the summer and winter. Range conditions are from poor to good. Forage production is low in the foothill areas and moderate in the higher areas. There are several structural range improvements in the area. Additional fencing and water developments may be needed to manage livestock at a more intensive level. Vegetative type conversion potential is minimal.

In the vicinities of the most recent heavy mineral exploration activities, potential for additional exploration and development is high.

Historical occurrence of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Iron Springs-Wildcat Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							57.2		57.2
Minimum Level (Custodial)					57.2				
Intensive Wildlife & Dispersed Rec.		57.2	57.2	57.2		57.2			
Stewardship Wildlife, Range & Dispersed Rec.	57.2								
Market Opportunities (Timber and/or Grazing)								57.2	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Iron Springs-Wildcat Peak*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	2	2	2	2	2	0	3	0
Livestock Grazing	AUM	1339	1235	1235	1235	1103	1235	1325	1500	1339
Dispersed Recreation	MRVD	6.4	7.6	7.6	7.6	4.7	7.6	7.6	4.7	7.6
Wildlife	MWFUD	.9	2.6	2.6	2.6	.9	2.6	2.6	.9	2.6
Wildlife Habitat Improvement	Acres	5	40	40	40	4	40	0	3	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Iron Springs - Wildcat Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	57.2	0	57.2
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. wood products Int./Nat. very low	Same as Alt. A ---------->					Reduced mining Int./Nat. will be low	Same as Alt. A	Same as Alt. F
Solitude	No change oppor. for solitude will remain moderate	Same as Alt. A ---------->					ORV restrictions oppor. for solitude to mod./high	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A ---------->							
Challenging Experience	Moderate opportunities	Same as Alternative A ---------->							
Special Features	Gate cliff archeological site	Same as Alternative A ---------->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 400 acres of wildlife habitat improvement and 20 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.

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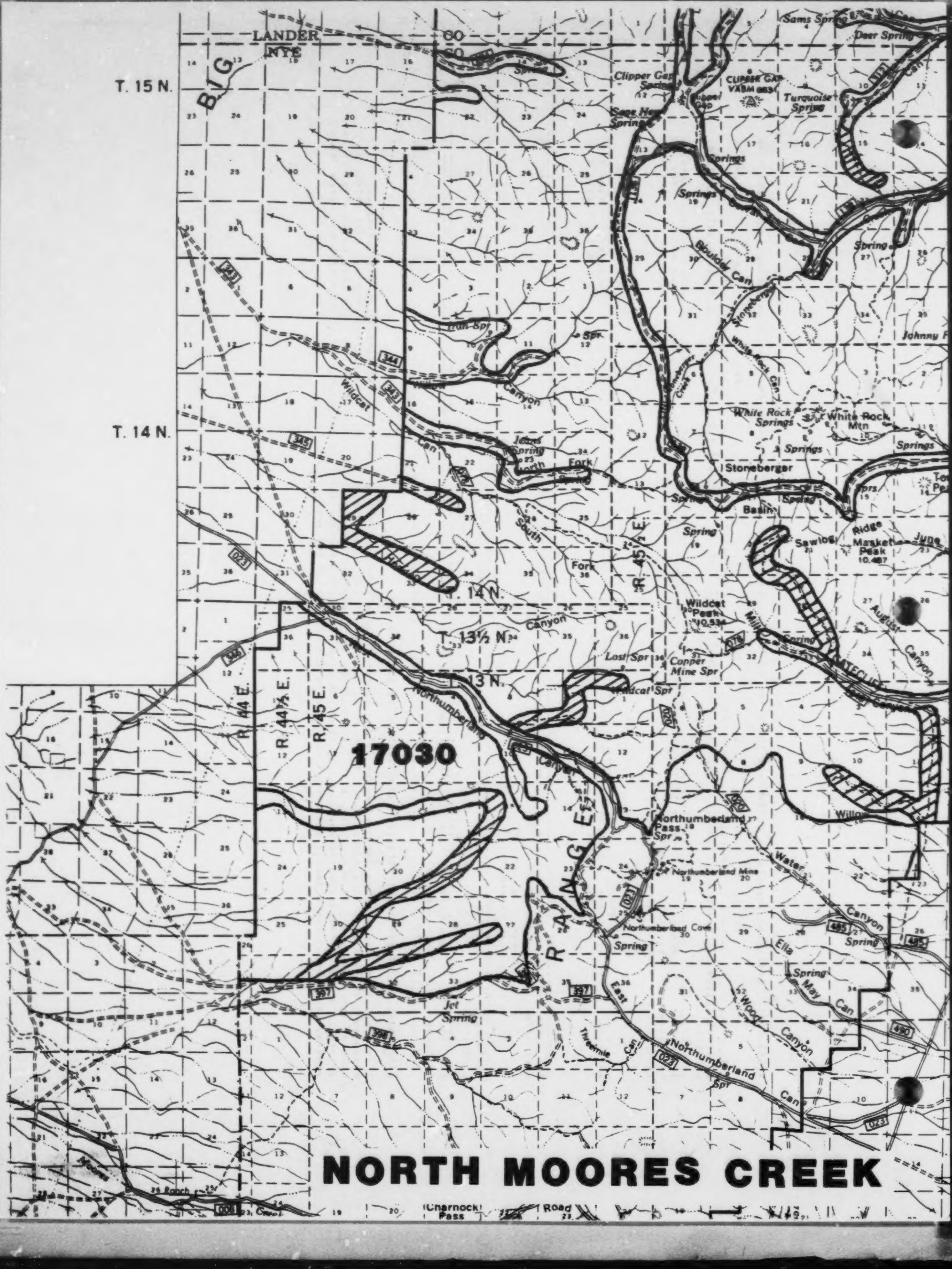


NORTH MOORES CREEK

Roadless Area Name: North Moores Creek, #17030

Net Acres: 12635

Description

The North Moores Creek roadless area is located in the Toquima range approximately 75 miles northeast of Tonopah. It is accessible from three sides by roads and lies within 12 miles of State Highway 376.

This area consists of rolling mid-elevation hills with a few higher peaks. There are numerous canyons and washes which open into wide basins. Primary land types are Arid Foothill lands and arid alluvian fan lands. Alluvial fans on the west slope down towards the valley floor of Big Smoky Valley. Elevations range from 6,600 feet to almost 9,300 feet near Northumberland summit.

The most common vegetative type is the sagebrush community, dominated by either big or low sagebrush. Some pinyon-juniper woodlands occur at the higher elevations.

Current uses in this area include livestock grazing and mineral exploration. Grazing is an historic use which will continue. Exploration consists primarily of prospecting, with little direct impact in the way of roads and drill sites.

The unit is surrounded by similar lands on three sides, with Big Smoky Valley on the western border.

This unit does not possess any special or unique features.

Capability

The North Moores Creek roadless area is bordered by roads on three sides. The western border is National Forest/Bureau of Land Management boundary which is not easily recognized, even when marked. However, there are no important topographical features which could better serve as boundaries. A large area of less than 5,000 acres has been found to be isolated from the unit by roads and has been removed from further consideration (see map). This change is the only boundary modification required.

The natural integrity of the roadless area is essentially intact with few man-made intrusions. No range developments occur here, and a small number of old mining disturbances along the northeastern boundary are unobtrusive. Overall, the area appears very natural, with little indication of man's activities.

Topographic variation is good in some parts of the unit; however, slopes tend to be long and gentle, and the dissecting washes shallow. Topographic screening is minimal throughout much of the unit. Vegetation does not provide any screening except in those areas where pinyon-juniper woodlands occur. The small extent of the woodlands and their scattered nature make vegetative screening poor overall. Opportunities for solitude are poor in this unit.

Opportunities for primitive recreation include hunting, hiking, horseback riding and camping. Lack of trails, potable water, notable features and scenery limit the quality of these opportunities. This is further supported by very low recreationa use.

This unit provides the recreationist with the challenge of hiking or camping in an arid, remote environment. Little shelter from the elements is provided in the wooded portions, and none occurs in the alluvial fans. The recreationist must be prepared for self-sufficiency, especially in carrying all his own water, although the proximity of the Northumberland mine makes this need less urgent.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive, threatened or endangered species of plants are known to occur here.

No unique ecosystems or special geological features are known to exist in the area.

Availability

Due to the limitations listed above, recreational use of this unit is very low probably not over 50 RVD's annually. The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase, and it is certain that this unit could support increased use. However, such an increase is unlikely to occur.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative types, including the sensitive species listed earlier.

This unit is contained within a single National Forest watershed. No systematic survey of watershed conditions has been made. Overall conditions appears to be fair. Surface water quality is impacted by livestock use. Free water is limited to a very few springs and seep areas.

North Moores Creek lies within one National Forest livestock allotment. One operator grazes cattle from November through June, for approximately 200 AUM's annually. The area has been grazed by domestic livestock since at least 1880.

This area is part of the Intermountain Sagebrush Ecoregion (3130-021) and contains primarily the Great Basin sagebrush ecosystem type. Juniper-pinyon ecosystems are poorly developed and small in extent. Riparian habitat is essentially non-existent.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in the area. No commercial cordwood sales have been proposed.

North Moores Creek lies within the Northumberland caldera and is characterized by tuffaceous sediments. Most of the area is covered by mining claims. There is high potential for both gold and silver deposits in diseminated and vein forms, as well as moderate potential for tungsten and molybdenum/copper.

Although little formal archaeological investigation has been conducted, the area is environmentally similar to adjacent areas of known sensitivity and moderate sensitivity is expected here.

There is little potential that this unit will be required for utility corridors or electronic sites.

There is presently no burning plan for the area. No fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately-owned lands contained within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles N.E. of North Moores Creek. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderenss, and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas are about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The North Moores Creek area was not reevaluated during RARE II.

The primary ecosystem type represented in this roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: North Moores Creek

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							12.6		12.6
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		12.6	12.6			12.6			
Stewardship Wildlife, Range & Dispersed Rec.	12.6			12.6	12.6				
Market Opportunities (Timber and/or Grazing)								12.6	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: North Moores Creek*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	200	151	151	200	200	200	200	209	200
Dispersed Recreation	MRVD	2.4	2.5	2.5	2.4	2.4	2.4	2.5	1.7	2.5
Wildlife	MWFUD	.2	.4	.4	.2	.2	.2	.4	.2	.4
Wildlife Habitat Improvement	Acres	0	5	5	0	0	0	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

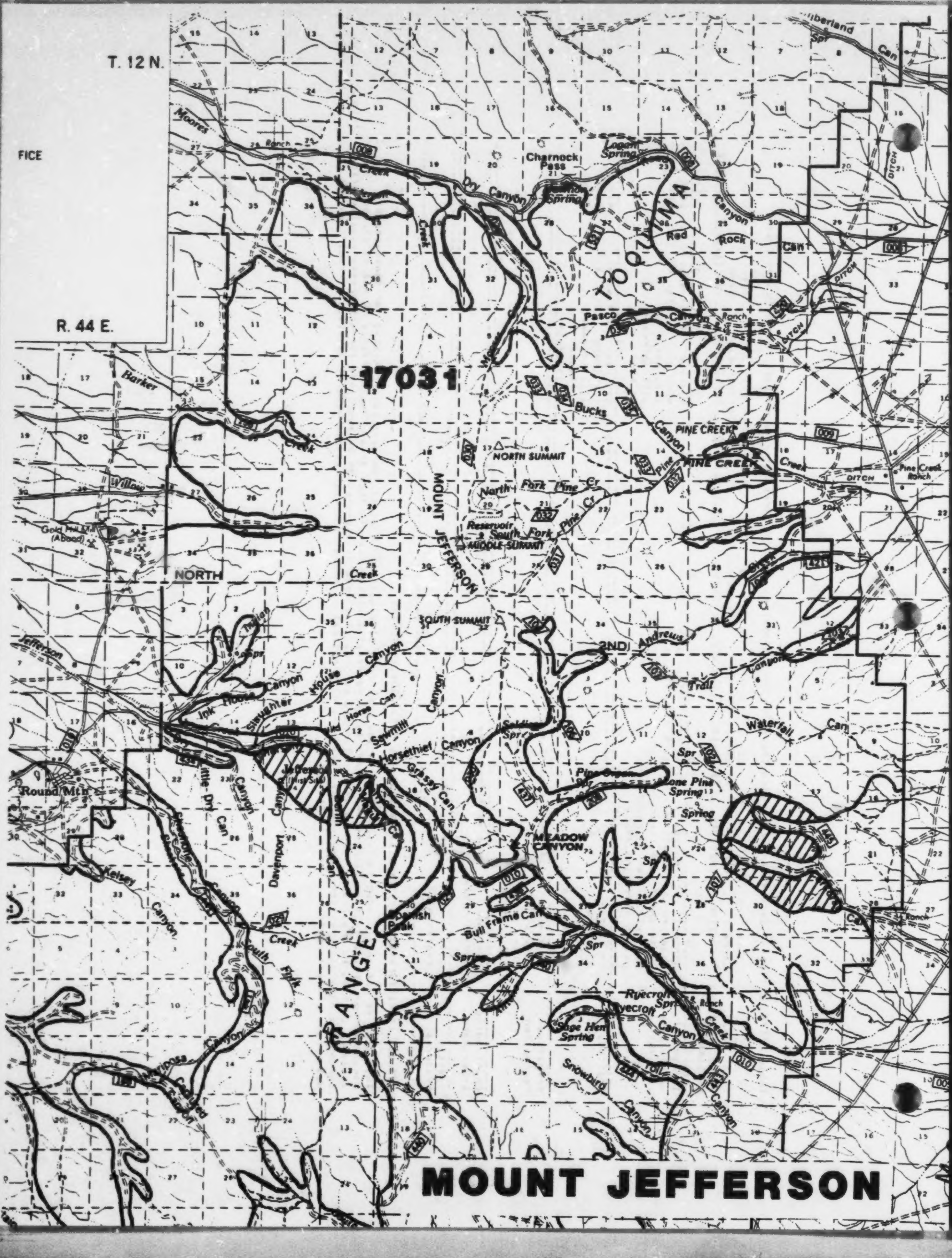
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: North Moores Creek

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	12.6	0	12.6
Integrity/ Naturalness (Int./Nat.)	Mining, wood products Int./ Nat. will remain mod/ high	Mining, wildlife hab. impr. wood products Int./Nat. Mod./high	Same as Alt. B	Same as Alt. A	---------------------->		Reduced mining Int./Nat. will increase to high	Same as Alt. A	Same as Alt. F
Solitude	No change oppr. for solitude will remain low	Same as Alt. A -->					ORV restrictions will increase solitude to low./mod.	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A -->							
Challenging Experience	Limited opportunities	Same as Alternative A -->							
Special Features	Not represented	Same as Alternative A -->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



MOUNT JEFFERSON

Roadless Area Name: Mount Jefferson, #17031

Net Acres: 68570

Description

The Mount Jefferson roadless area on the Tonopah Ranger District lies in the central portion of the Toquima range approximately 60 miles north of Tonopah. The area is accessible by improved dirt roads from all sides, and lies within 10 miles of State Highway 376.

This roadless area is distinguished by rugged, high elevation topography, falling into the Mountain Upland and Rugged Front and Mountain Land categories. Some Table Mountain lands occur along the summit of Jefferson Peak, where glacial troughs are also be found. Elevations range from 5,800 feet along the western boundary to 11,949 feet at the top of Mount Jefferson.

A variety of vegetative types occur in this roadless area, probably the most common being pinyon-juniper woodlands, big sagebrush and low sagebrush communities. Isolated groves of limber pine and aspen occur in high elevation areas, and the glacial troughs support plant communities quite different from those commonly found in the Great Basin.

Current uses in this area include grazing, dispersed recreation, and mineral exploration. Livestock grazing is an historic use of Mount Jefferson which will be continued. Dispersed recreation includes hunting, fishing, hiking, camping and many other primitive activities. Mineral exploration has occurred around the boundaries of the roadless area, and is continuing today in the Corcoran Canyon area on the east side (indicated on map) and along the southwest boundary near Slaughterhouse Canyon.

The roadless area is bounded by Big Smoky Valley on the west and by Monitor Valley on the east. Mount Jefferson is separated from other lesser peaks to the north and south by deep canyons, and has the appearance of standing alone on the horizon.

Special features of Mount Jefferson include desert bighorn sheep, the fishery in Pine Creek, and an extensive prehistoric site complex.

Capability

The Mount Jefferson Roadless Area is bordered on the north and south by definable roads. The east and west boundaries consist of surveyed Forest Service/Bureau of Land Management (BLM) boundaries which are not easily recognized, even when marked. Some management problems might occur along the unfenced FS/BLM boundaries and intrusive roads; however, there are no important topographical features which would better serves as boundaries. A boundary adjustment reducing the 68,570 acre core which includes the high elevation lands adjacent to Mt. Jefferson is feasible. This boundary would minimize wilderness/mineral potential conflicts.

The natural integrity of the roadless area remains essentially intact with few man-made facilities. Range improvements, including fences and water developments, occur throughout the area, and several trails to Jefferson summit are included on the Forest trail system and are maintained only to the standard necessary to ensure public safety. There are many trails established by livestock, these are also used by horses and deer and do not materially detract from the natural appearance of the mountain.

Due to the rugged terrain, topographic variation is excellent and provides many opportunities for solitude. Vegetation is not a factor in screening except in the pinyon-juniper woodlands found at the middle elevations. Despite open terrain and lack of vegetation at the highest elevations, the height alone gives the recreationist a feeling of isolation from the world. Solitude is not a factor of area size or remoteness, but of topographic and vegetative screening and physical removel from the surrounding valleys.

Opportunities for primitive recreation include camping, backpacking, hiking, hunting, picnicking, birdwatching, horseback riding, rock hunting, fishing, ski touring, photography and sightseeing. Many of these activities depend on trail access to the interior of the unit, as well as on trailheads for vehicle access.

The roadless area provides the recreationist with the challenge of hiking or camping in a hostile environment, especially at the highest elevations. There is little potable water on Mount Jefferson, and the climate near the summit is harsh, with constant winds, low temperatures (seldom above freezing at night, even in summer) and the threat of snow any day of the year. The rugged terrain offers opportunities for diddicult hikes and some bouldering, although rock climbing is not feasible due to the rock type. The recreationist must be prepared for complete self-sufficiency on top of the mountain, since medical help and services are many miles away.

Sensitive wildlife species which occur in this area include the desert bighorn sheep, pika, golden eagle, prairie falcon, ferruginous hawk, goshawk, sharp-shinned hawk, Coopers hawk, screech owl, long-eared owl, short-eared owl, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife.

One sensitive plant species (Haplopappus alpinus) occurs on Mount Jefferson. This species was proposed for listing with the U.S. Fish and Wildlife Service as a threatened plant. It does not appear to be threatened by current management practices.

In 1973 a portion of Mount Jefferson was designated as a Research Natural Area (RNA), although it was never withdrawn from mineral entry. The designation was made due to the potential for "evolutionary and telechoric research." The area's naturalness, inaccessibility, and isolation from similar environments were instrumental in the approval of RNA designation.

Availability

Many types of primitive recreation are availble in the Mount Jefferson area. Hunting is perhaps the most popular sport, but other activities include hiking, fishing, horseback riding, camping, backpacking, rock hunting, picnicking, birdwatching, ski touring, photography and sightseeing. Due to the presence of significant cultural resources, short trips to view artifacts and their setting have become somewhat popular.

The Analysis of the Management Situation for the Toiyabe National Forest (AMS) indicates that demand for dispersed recreation will continue to increase. There are no reliable figures showing current recreational use of Mount Jefferson, but estimates using Forest Service and Department of Wildlife figures indicate that the area supports a minimum of 2665 RVDs annually. Due, to the relatively low use of the area, it is believed that Mount Jefferson could support additional dispersed recreation use. Recreation management will continue to center on trail maintenance.

Mount Jefferson supports a diverse fauna, including the sensitive wildlife species previously mentioned. The most impressive species in the roadless area is the desert bighorn sheep. Twenty-eight sheep have been transplanted to Mount Jefferson in an attempt to reestablish the species in its historic range. Although the numbers are still low and sheep tend to inhabit very rugged terrain, it is likely that the herd will become a minor attraction in itself for wildlife viewing. Continued tracking of marked individuals, annual counting flights, and restrictions on land uses will substantially alter important habitat.

The roadless area contains a variety of habitats which leads to greater plant and animal species diversity. The numerous sensitive species which inhabit the area exhibit habitat requirements based upon maintenance of this diversity. Land management planning has in the past supported maintenance of these diverse vegetative communities in both quality and quantity required for enhancement of all wildlife species.

Portions of several Forest Service watersheds are included in this area. Overall condition of the watersheds is good, but there is potential for improvement in some locations. Some minor watershed improvement structures exist in the southern portion of the area, but these are of native rock and are unobtrusive. Water quality is affected by the presence of domestic livestock, and most water should be boiled before drinking. Distribution of water sources is not good, many creeks are either excluded from the roadless area or follow the boundary. The mountain itself contains numerous small seeps and wet meadows, which do not provide sufficient water for drinking.

Mount Jefferson includes portions of four separate livestock allotments administered by the Forest Service. Cattle graze the area from June to October annually. Approximately 1,960 AUMs are permitted to two operators. The area has been grazed by domestic livestock since at least 1870. A number of range improvements (primarily fences) exist and require annual maintenance; however, most of these are accessible by vehicle along the intrusive roads.

Mount Jefferson is located in the Intermountain Sagebrush Ecoregion (3130-021) and contains both the juniper-pinyon woodland and the Great Basin sagebrush ecosystems. A number of different habitat types occur here. Groves of limber pine and aspen occur at higher elevations, and riparian areas represent only .1% of all the lands in Nevada, maintenance is important. The variety of habitats leads to a diverse flora and fauna which makes Mount Jefferson unique in many ways.

The area is contained within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted. Although some pinyon-juniper (and possible limber pine) harvest occurred on the northeast side of the unit during the early 1900's, no commercial grade lumber exists in this area. There are no plans for development of green cordwood areas.

The Mount Jefferson area is part of a group of volcanic calderas with some associated mineralization. Ore deposits are primarily gold and silver. Rhyolite flows and tuffs make up the parent rocks. On the southern flank of the mountain there are some metamorphic rocks showing mineralization. Current mineral exploration is concentrated in teh southwest corner near Jefferson Canyon, and in the southeast near Corcoran Canyon (shown on map). Potential for mineral development must be rated fair to good considering the known mineralized areas and the continuing exploration interest. The area of high mineral potential lies along the south and west fringes of the roadless area. Mineral potential on the higher elevation lands is considered low.

There are significant cultural resources on Mount Jefferson. Important prehistoric sites exist at high elevations, consisting of living areas and camps with associated artifacts. Management of these sites has centered on controlled excavation and secrecy as to exact loction to discourage vandalism. No restrictions on other land uses have been required for protection of the resource. The archaeological complex on Mount Jefferson is considered significant and steps will be taken to nominate the resource to the National Register of Historic Places. Historic and prehistoric sites are also known to exist at lower elevations in this unit.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites. However, a Forest Service repeater is located on the summit of Mount Jefferson, and it is unlikely that it will be removed. Maintenance on the repeater is performed annually by helicopter. If this method of transportation is prohibited, the annual maintenance will become much more difficult and expensive.

The Mount Jefferson area has sustained some prescribed burns for improvement of habitat and forage. The area is covered by a burning plan which indicates that future burns may be desirable. At this time there are no plans for fire protection or development activities related to fire.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately owned lands within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Mount Jefferson. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wildernss has 72,000 RVD's of use.

Some non-local support was generated for designation of this area as wildenress during the RARE I and central Nevada land use planning effort. The Jefferson area was not reevaluated during RARE II.

The primary ecosystem type represented on Mount Jefferson is common throughout Nevada. The more unusual ecosystem components represented in the subalpine areas are included within the Mount Jefferson RNA, which provides some protection from alteration. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Mount Jefferson

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			68.6	68.6		31.0	68.6	68.6	68.6
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		68.6				37.6			
Stewardship Wildlife, Range & Dispersed Rec.	68.6								
Market Opportunities (Timber and/or Grazing)					68.6				
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Mount Jefferson*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	4	4	0	0	7	4	0	0	0
Livestock Grazing	AUM	1449	1241	1258	1258	2145	1165	1258	1258	1258
Dispersed Recreation	MRVD	13.4	25.3	26.6	26.6	9.3	26.6	26.6	26.7	26.7
Wildlife	MWFUD	1.4	3.6	3.8	3.8	1.4	3.8	3.8	3.8	3.8
Wildlife Habitat Improvement	Acres	64	153	0	0	0	166	0	0	0
Fuel Management	Acres	0	56	0	0	47	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

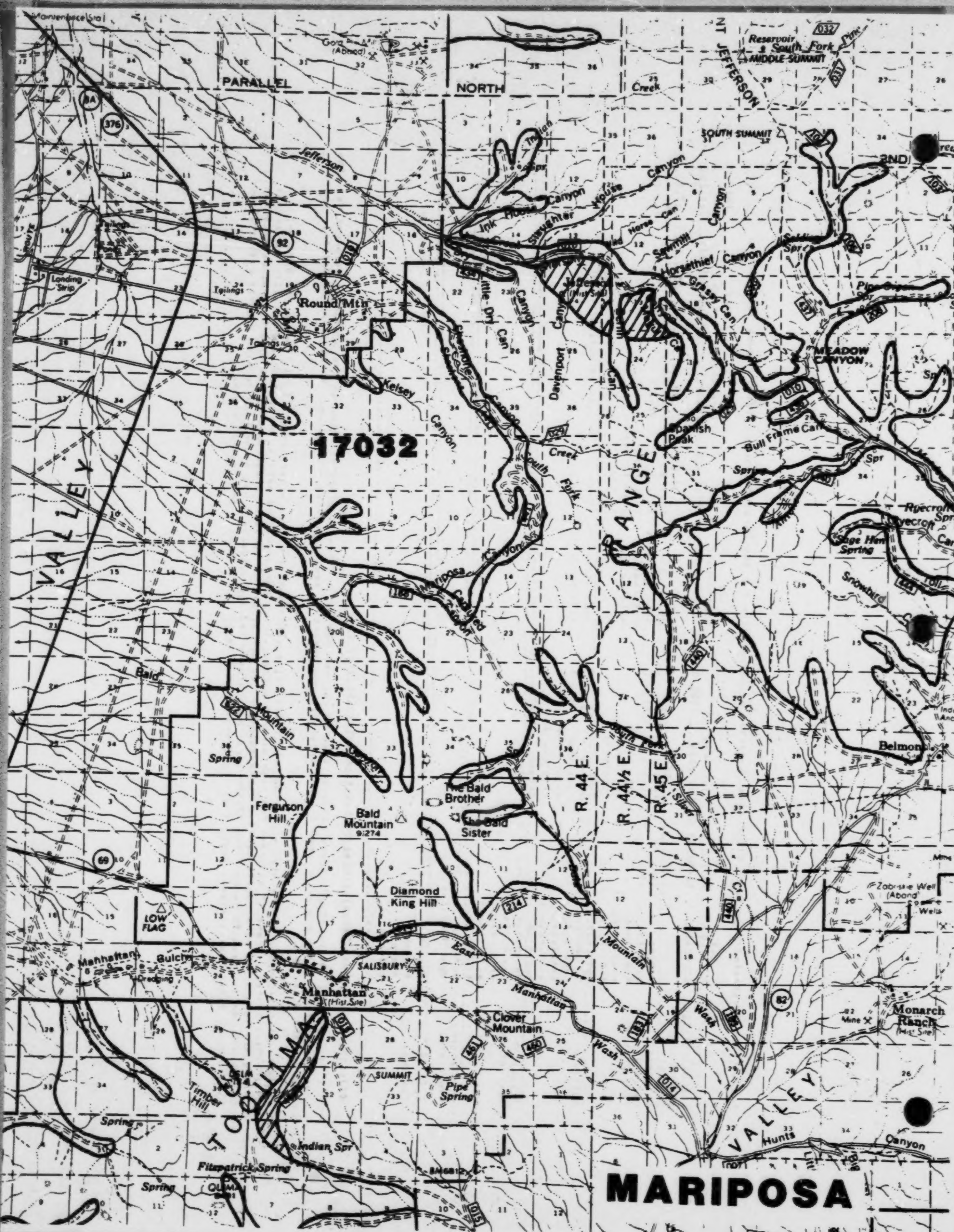
Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Mount Jefferson

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS ACRES	0	0	42.6	68.6	0	31.0	68.6	68.0	68.6
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. wood products Int./Nat. moderate	Same as Alt. A	Reduced mining Int./Nat. will increase to high	Same as Alt. C	Mining & wood products Int./Nat. will be mod.	Same as Alt. A Int./Nat. will increase to high	Same as Alt. C	Same as Alt. C	Same as Alt. C
Solitude	No change oppor. for solitude will remain mod/high	Same as Alt. A	ORV restriction Oppor. for solitude increase to high	Same as Alt. C	Same as Alt. A ---------------->		Same as Alternative C ------------>		
Primitive Recreation	No change Oppor. for prim. rec. will remain high	Same as Alternative A ------------>							
Challenging Experience	Mod/high opportunities	Same as Alternative A ------------>							
Special Features	Desert bighorn sheep, cultural resources	Same as Alternative A ------------>							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

The 31,000 acres of the 68,600 acres roadless area is recommended for wilderness classification in the preferred alternative. The remaining 37,600 acres are prescribed for non-intensive management or semi-primitive recreation. There is no commercial timber base in the area.

Wilderness designation of the high elevation "core" area will contribute a unique ecosystem and land type to the National Wilderness System. Areas of moderate and high mineral potential are excluded, and impacts on grazing and wildlife is minimal. There are 1600 acres of wildlife habitat improvement and 40 MCF of pinyon fuelwood prescribed in the area not recommended for wilderness in the next 10 years. The 37,600 acres not recommended for wilderness has a moderate to high mineral potential and unscheduled mineral development could impact wilderness on some of the area over the next 10 years.


17032
MARIPOSA
PARALLEL
NORTH
JEFFERSON
SOUTH SUMMIT
MIDDLE SUMMIT
Reservoir
South Fork
Jefferson
Round Mtn
Landing Strip
Tailings
Ink House Canyon
Slaughter House Canyon
Horsethief Canyon
Grassy Can
Summit Canyon
Little Dry Can
Davenport Can
Kelsey Canyon
South Creek
South Fork
Mariposa Canyon
MEADOW CANYON
Spanish Peak
Bull Frame Can
Ryecroft Spr
Ryecroft Can
Sage Hen Spring
Snowbird
Belmont
VALLEY
RANGE
R. 44 E.
R. 44½ E.
R. 45 E.
Bald Mountain
Bald Mountain 9274
Spring
Ferguson Hill
The Bald Brother
The Bald Sister
Diamond King Hill
LOW FLAG
Manhattan Gulch
Dredging
SALISBURY
Manhattan (Hist Site)
Clover Mountain
East Manhattan Wash
Mountain Wash
Zabriskie Well (Abond)
Monarch Ranch (Hist Site)
Mine
SUMMIT
Pipe Spring
Timber Hill
Indian Spr
Fitzpatrick Spring
Spring
Hunts Canyon
Little Fish
TOQUIMA
VALLEY
376
8A
92
69
82

Roadless Area Name: Mariposa, #17032

Net Acres: 9110

Description

The Mariposa roadless area lies in the southern Toquima Range approximately 45 miles north of Tonopah. The area is accessible by dirt roads on the north and south, and lies within two miles of State Highway 376.

This area is characterized by rolling foothills on the west which lead into rugged, mid-elevation slopes dissected by steep canyons. Primary land types include Arid Foothill Lands and Rugged Front and Mountain Lands. Elevations range from 6,400 feet along the western border to almost 9,000 feet on the highest peaks.

The most common vegetative type is the pinyon-juniper woodland, which is interspersed with sagebrush communities. Both big and low sagebrush types are found in the unit, with some mountain mahogany groves at the highest elevations. The low elevation hills are covered almost exclusively by sagebrush vegetation.

Current uses in this area include grazing, dispersed recreation, and mineral exploration. Livestock grazing is an historic use which will be continued. Dispersed recreation includes hunting and several other primitive activities. Mineral exploration has been limited to prospecting, but active exploration may begin soon. Several surface right claims exist.

The roadless area is bordered by Big Smoky Valley on the west and north, and by similar high elevation country on the south and east. Approximately half of the boundary consists of improved dirt roads.

There is no special features in this area.

Capability

The Mariposa roadless area is bordered on two sides by definable roads. The west and north boundaries consist of National Forest/Bureau of Land Management (BLM) boundaries which are not easily recognized, even when marked. Some management problems could occur along the unfenced NF/BLM boundary; however, there are no important topographic features which could better serve as boundaries. Wilderness characteristics will not be enhanced by boundary changes, and there are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of the roadless area remains intact with very few man-made intrusions. A few old mining scars have local impacts but are generally well screened by vegetation. Overall, the unit appears natural, with little indication of man's activities.

Most of the higher country has excellent topographic variation, leading to many opportunities for solitude. These opportunities are increased by the occurrence of dense pinyon-juniper woodlands which provide vegetative screening as well. Opportunities for solitude are minimal on the alluvial fans where topographic relief is not pronounced and vegetation is low growing. Overall, solitude may be achieved in part of the unit and opportunities are good.

Primitive activities which may be pursued in this unit include hunting, hiking, camping, horseback riding, rock hunting and picnicking. Most of these activities depend on trail access. Due to the lack of a trail system, and the lack of vehicle access to the interior, it is doubtful that the quality of recreational experience is high. However, day outings along Shoshone Creek, some of which lies within the unit, are feasible, although the creek lies along a boundary road. Recreational use is currently limited to Shoshone Creek and its surroundings.

This area provides the recreationist with the challenge of hiking or camping in a remote environment which can become quite hostile from snow or cold at any time of the year. The rugged terrain offers opportunities for exhausting hikes, especially since there are no trails. Potable water is limited, and the receationist must be prepared for self-sufficiency over most of the unit. However, due to the proximity of Round Montain (less than 1 mile away) the need for complete self-sufficiency is limited.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, Coopers hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive, threatened or endangered species of plants are known to occur here.

Availability

Although several types of primitive activities are available in this unit, the quality of the experience is limited by lack of trails, water and notable features. Current recreational use is believed to moderate, around 300 RVD's annually. The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. This area could undoubtedly sustain an increase in such use; however, due to the problems mentioned above, it is unlikely that such an increase will occur.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative communities, including the sensitive species listed above.

This unit is contained within a single National Forest watershed. No systematic survey of watershed condition has been made. Overall condition appears to be fair. Surface water quality is impacted by livestock. Water sources are limited to Shoshone Creek and scattered springs and seeps.

Mariposa is contained within one livestock allotment. One operator grazes cattle from November to June, for a total of approximately 25 AUM's annually. The area has been grazed by domestic livestock since at least 1870.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021) and contains the juniper-pinyon and Great Basin sagebrush ecosystems. Some mountain mahogany occurs at the higher elevations. Riparian habitat is limited to Shoshone Creek and a few small habitats surrounding spring and seep areas. Since riparian areas represent only .1% of all the lands in Nevada, maintenance of these areas is a priority and will continue to be such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area. No cordwood sales or cutting units are proposed.

This area is of volcanic origin and contains some Cretaceous granitic intrusives. Mining activity consists primarily of prospecting. Some surface right claims for mercury are present on Shoshone Peak. Mineral potential is moderate for gold and silver in vein deposits.

Cultural resources in this area include historic sites related to the early mineral exploration period around 1900. Prehistoric resources consist of scattered sites and by extrapolation from similar areas, it is expected that there is a low to moderate archaeological sensitivity.

It is unlikely that any portion of this unit will be required for a utility corridor. An electronic site used by several entities exists on Shoshone Peak and will continue to be used. Access is by boundary road.

There is presently no burning plan for the area. No fire protection or development activities are anticipated.

There are no privately owned lands contained within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Mariposa. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 and 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Mariposa roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Mariposa

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							9.1		9.1
Minimum Level (Custodial)					9.1				
Intensive Wildlife & Dispersed Rec.			9.1	9.1		9.1			
Stewardship Wildlife, Range & Dispersed Rec.	9.1								
Market Opportunities (Timber and/or Grazing)		9.1						9.1	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Mariposa*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	2	1	1	1	1	0	2	0
Livestock Grazing	AUM	40	93	40	40	22	40	40	93	40
Dispersed Recreation	MRVD	1.8	1.2	3.6	3.6	1.2	3.6	3.6	1.2	3.6
Wildlife	MWFUD	.2	.2	.2	.2	.2	.2	.2	.2	.2
Wildlife Habitat Improvement	Acres	0	0	26	26	0	26	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

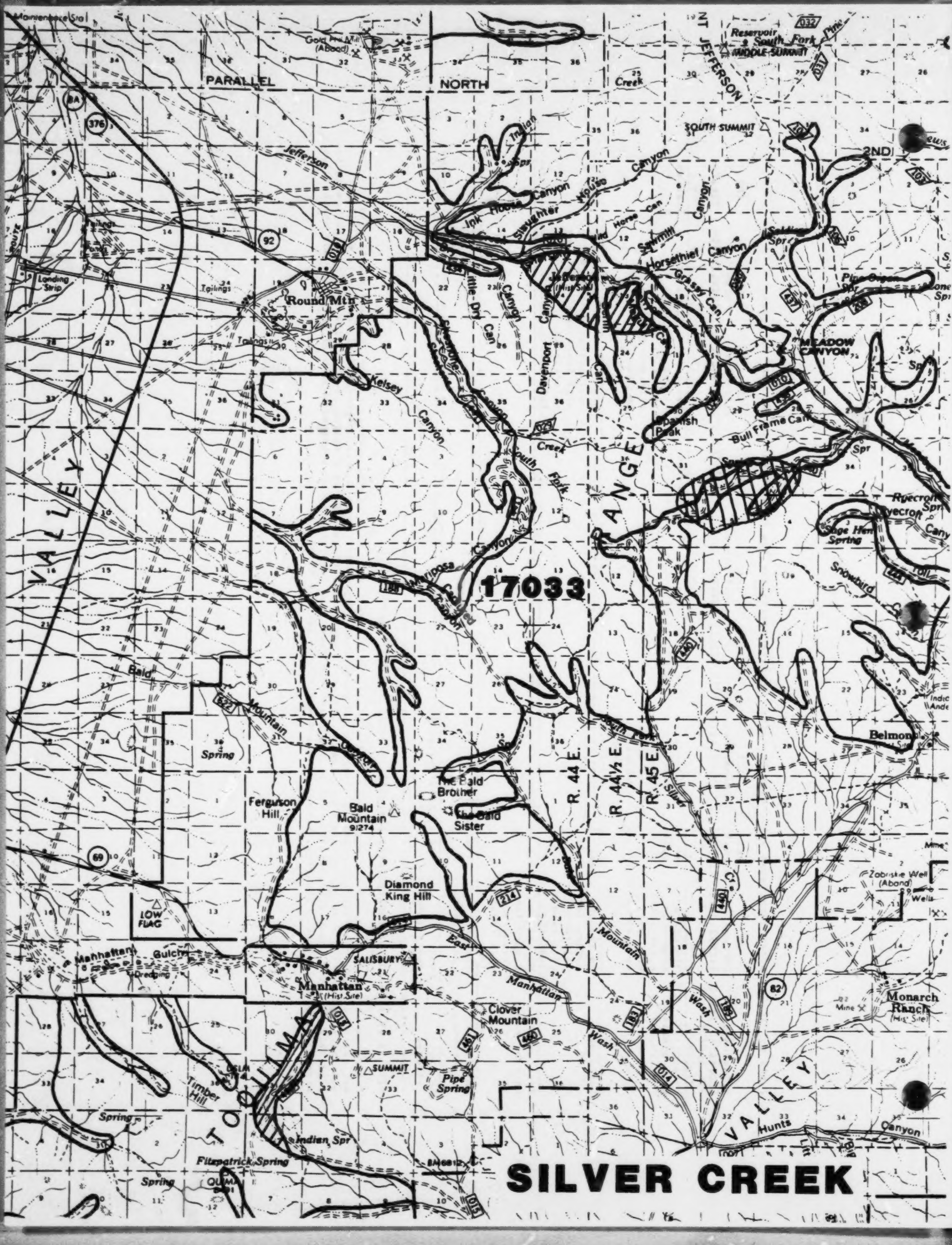
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Mariposa

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	2.1	0	2.1
Integrity/ Naturalness (Int./Nat.)	Mining, & wood products Int./ Nat. will be mod/high	Same as Alt. A	Mining, wildlife hab. impr., and wood products Int./Nat. mod./high	Same as Alt. C	Same as Alt. A	Same as Alt. C	Reduced mining Int./Nat. will increase to high	Same as Alt. A	Same as Alt. F
Solitude	No change oppor. for solitude will remain mod/high	Same as Alt. A ------------------------------------>					ORV restriction will increase solitude to high	Same as. Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A ------------------------------------>							
Challenging Experience	Moderate opportunities	Same as Alternative A ------------------------------------>							
Special Features	Not represented	Same as Alternative A ------------------------------------							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 260 acres of wildlife habitat improvement and 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.


SILVER CREEK
17033
PARALLEL
NORTH
JEFFERSON
SOUTH SUMMIT
MIDDLE SUMMIT
Reservoir
South Fork
Round Mtn
Tailings
Landing Strip
Jefferson
Ink House Canyon
Slaughter House Canyon
Horsethief Canyon
Sawmill
Grassy Can
MEADOW CANYON
Pine Organ
Spanish Peak
Bull Frame Can
Ryecroft Spr
Sage Hen Spring
Snowbird
Little Dry Can
Davenport
Kelsey Canyon
South Fork
Creek
Mariposa Canyon
RANGE
R. 44 E.
R. 44½ E.
R. 45 E.
Belmont
VALLEY
Bald Mountain
Spring
Ferguson Hill
Bald Mountain 9274
The Bald Brother
The Bald Sister
Diamond King Hill
LOW FLAG
Manhattan Gulch
Dredging
SALISBURY
Manhattan (Hist Site)
East Manhattan Wash
Mountain
Clover Mountain
Pipe Spring
SUMMIT
Timber Hill
TOQUIMA
Indian Spr
Fitzpatrick Spring
Spring
Zabriskie Well (Abond)
Wells
Monarch Ranch (Hist Site)
Mine
Hunts Canyon
VALLEY
Indian
Gold Pt Mill (Abond)
2ND
92
376
69
82

Roadless Area Name: Silver Creek, #17033

Net Acres: 28435

Description

The Silver Creek roadless area is located in the southern Toquima range approximately 40 miles north of Tonopah. The area is accessible by improved dirt roads from all sides and lies within 4 miles of State Highway 376.

This area is composed primarily of mid to high elevation lands with steep slopes and numerous canyons and washes. The rugged terrain includes Mountain Uplands and Rugged Front, Mountain Lands which slope down to Arid Foothill lands on the north and south. Elevations range from 6,600 feet near Round Mountain to 9,600 feet on top of Shoshone Peak.

The most common vegetative type in this area are pinyon-juniper woodland and sagebrush communities, which are dominated by either big or low sagebrush. Some mountain mahogany occurs at higher elevations.

Current uses in this area include livestock grazing, dispersed recreation, and mineral exploration. Grazing is an historic use which will be continued. Recreation centers on hunting and camping, but may include a number of other activities. Mineral exploration involves road construction and drilling, and has been concentrated in the northern protion of the unit. The area surrounding the old town of Jefferson, in particular, has been impacted by mining and has been excluded from the roadless area (see map).

The unit is separated from similar lands by dirt roads. Meadow Canyon and Jefferson Canyon form the northern border while Manhattan Gulch and the summit road form the southern border. There is little to differentiate this unit from the surrounding lands.

Special features in this unit include the Jefferson Canyon fishery and upland game bird hunting.

Capability

The Silver Creek roadless area is bordered almost entirely by roads. Small sections of the border on the north, west and south are National Forest/Bureau of Land Management boundaries which are not easily recognized even when marked. Management problems could easily occur on the many intrusive roads, several of which end within less than a mile of each other in the southern portion. There are no significant topographic features which would better serve as boundaries. Wilderness characteristics will be enhanced by changing the boundary to exclude the mining activity on the north side, which is considered to be incompatable with wilderness values.

The natural integrity of the roadless area has been impacted by a number of man-made intrusions. Range improvements, including fences and water developments, are easily seen but not obtrusive. Several trails are used by livestock but not maintained. Mining scars occur in the south where a number of patented claims are included. The natural appearance of the unit has been adversely affected by these intrusions, especially in the south. In many localities the area does not appear entirely natural and free from man's works.

Due to the rugged terrain, topographic variation is excellent and provides many opportunities for solitude. Vegetation is a factor in screening in the pinyon-juniper woodlands, but not throughout much of the higher elevations where sagebrush communities are dominant. Despite the open terrain and lack of tall vegetation, elevation along often gives the recreationist a feeling of isolation from the world. Opportunities for solitude throughout much of this unit are quite good.

Primitive recreational activities available in this unit include hunting (both for deer and upland game), hiking, camping, picnicking, horseback riding, fishing and sightseeing. Most of these activities depend on road access, which is provided by boundary roads and intrusive roads. Trails are primitive but usable. Fishing is available in Jefferson Creek which follows the northern boundary road, and use of Jefferson Canyon is quite high due to its proximity to Round Mountain and the good road access.

This roadless area provides the recreationist with the challenge of hiking or camping in remote, high elevation environments where the weather can be quite changeable. Some shelter may be obtained in the woodlands, but the open terrain at the higher elevations provides few barriers to wind and cold. The rugged terrain offers opportunities for difficult hikes and rides. The recreationist must be prepared for self-sufficiency, although this need is not as pronounced as in other areas due to the proximity to Round Mountain and Manhattan.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, goshawk, Coopers hawk, short-eared owl, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive, threatened or endangered species of plants are known to occur here.

There are no unique opportunities for important scientific study.

Availability

The numerous types of primitive recreation which may be pursued in this unit depend heavily on road access, especially in Jefferson Canyon. Use is high in localized areas, although probably not more than 300 RVD's annually. The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. Probably as the population of Smoky Valley grows, this area will receive more use, which it can easily support.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative types, including the sensitive species listed above. Additionally, sage grouse and mourning doves occur in meadows and uplands on the east side, providing hunting opportunities. The fishery in Jefferson Creek provides the only angling resource in the area.

This unit contains portions of four Forest Service watersheds. No systematic survey of watershed conditions has been made. Overall condition appears to be fair. Surface water quality is impacted by livestock use. Some water sources occur in the northern portion of the unit. Free water is very scarce in the southern half.

Silver Creek roadless area contains portions of three Forest Service livestock allotments. In the north, cattle graze from June through September, and in the south from November to June. Approximately 300 AUM's are permitted to two operators. The area has been grazed by domestic livestock since at least 1870.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021) and contains primarily the Great Basin sagebrush and the juniper-pinyon ecosystems. Riparian habitat consists of streamside vegetation in Jefferson Creek and a number of meadow and spring areas in the northern half of the unit. Management will concentrate on preservation and enhancement of riparian areas.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this area. No commercial cordwood sales have been proposed.

This area is of volcanic origin with tuffs and rhyolites common. Some metamorphics occur in the very northern portion where potential for gold and silver is high. Mining exploration is currently centered in the north, but patented claims lying adjacent to the eastern border attest to past mining activity.

Historic and prehistoric cultural resources are known to occur in this unit. Of particular importance is the townsite of Jefferson City which is currently being evaluated for nomination to the National Register of Historic Places.

An electronic site on Shoshone Peak is accessible by a boundary road. This site is used by a number of entities and will continue to be used as such. No utility corridors or other electronic sites have been proposed for this unit.

There is presently no burning plan for the area. No fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

Private lands within the unit include a number of patented mining claims in the southern half near Manhattan. Most of these do not have road access. Access roads could be proposed in the future and cause management problems, but no proposals for access currently exist.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Silver Creek. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I central Nevada land us planning effort. The Silver Creek area was not reevaluated during RARE II.

The primary ecosystem type represented in the Silver Creek roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Silver Creek

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							28.4		28.4
Minimum Level (Custodial)					28.4				
Intensive Wildlife & Dispersed Rec.			28.4	28.4		28.4			
Stewardship Wildlife, Range & Dispersed Rec.	28.4								
Market Opportunities (Timber and/or Grazing)		28.4						28.4	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Silver Creek*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	2	4	2	2	2	2	0	4	0
Livestock Grazing	AUM	289	436	265	265	172	265	289	436	289
Dispersed Recreation	MRVD	5.6	3.8	11.1	11.1	3.9	11.1	11.1	3.8	11.1
Wildlife	MWFUD	.6	.6	1.2	1.2	.6	1.2	1.2	.6	1.2
Wildlife Habitat Improvement	Acres	5	0	72	72	0	72	0	0	0
Fuel Management	Acres	0	7	19	19	0	21	0	7	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

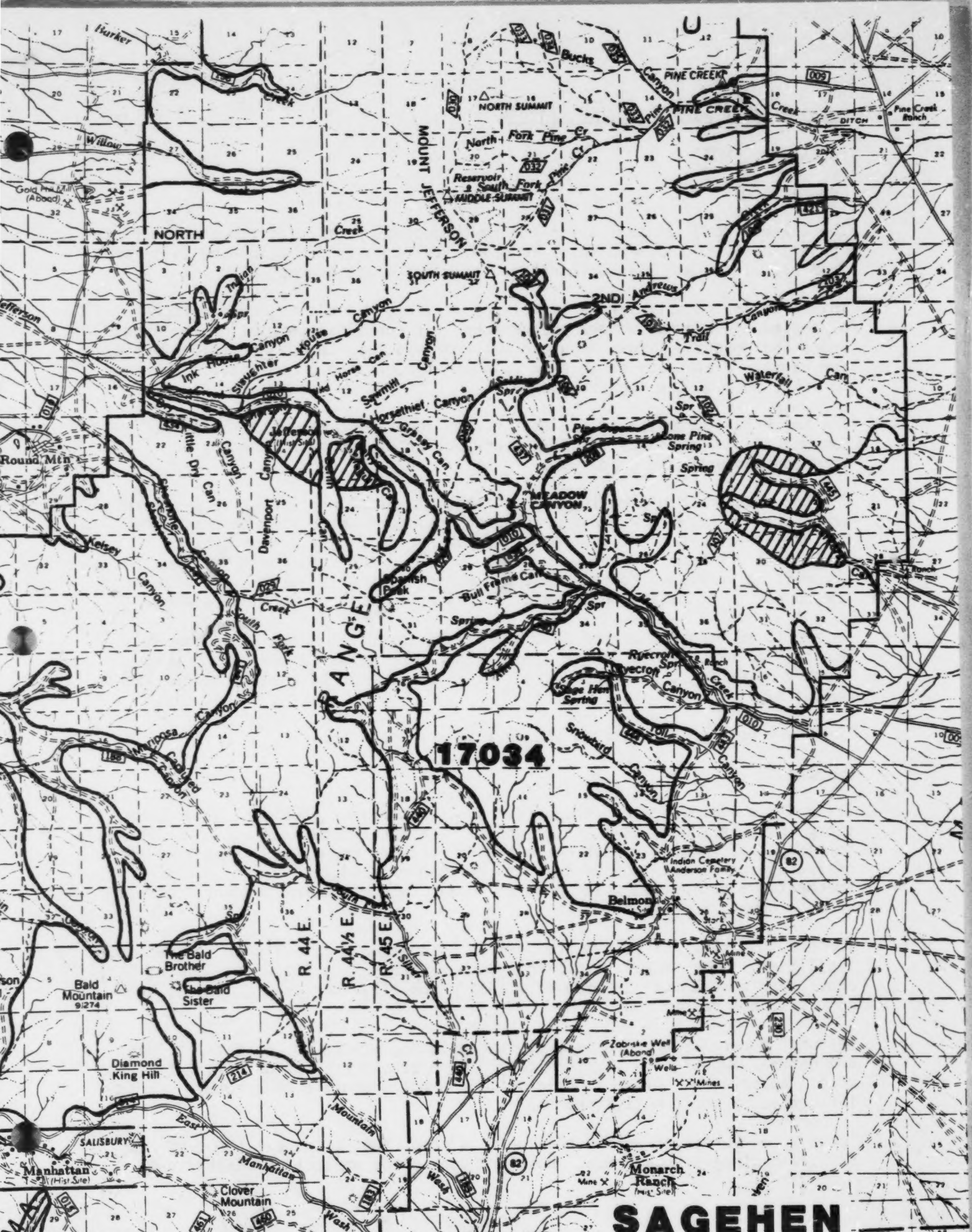
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Silver Creek

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	28.6	0	28.6
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. wood products Int./Nat. will be low	Mining & wood products Int./Nat. will remain low	Same as Alt. A ---------------->		Wood products scheduled Int./Nat. will be low/mod.	Same as Alt. A	Reduced mining Int./Nat. will increase to moderate	Same as Alt. B	Same as Alt. F
Solitude	No change oppor. for solitude will remain mod/high	Same as Alt. A ---------------->					ORV restriction will increase solitude to high	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A ---------------->							
Challenging Experience	Remoteness rugged terrain mod./high opportunity	Same as Alternative A ---------------->							
Special Features	Jefferson Canyon fishery	Same as Alternative A ---------------->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 720 acres of wildlife habitat improvement and 20 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.


17034
SAGEHEN
NORTH
MOUNT JEFFERSON
NORTH SUMMIT
MIDDLE SUMMIT
SOUTH SUMMIT
RANGE
R. 44 E.
R. 44½ E.
R. 45 E.
PINE CREEK
Pine Creek Ranch
North Fork Pine Cr
South Fork Pine Cr
Reservoir
Bucks Canyon
Harker Creek
Willow
Gold Hill Mill (Aband)
Round Mtn
Jefferson (Hist Site)
Ink House Canyon
Slaughter House Canyon
Indian Spr
Horsethief Canyon
Summit Canyon
Grassy Can
Little Dry Can
Davenport Canyon
Kelsey Canyon
South Fork Creek
MEADOW CANYON
Bull Frame Can
Spanish Peak
Andrews Canyon
2ND
Trail Canyon
Waterfall Can
Pine Spring
Lone Pine Spring
Spring
Ryecroft Spr
Ryecroft Canyon
Creek
Sage Hen Spring
Snowbird Canyon
Mariposa Canyon
Indian Cemetery Anderson Family
Belmont
The Bald Brother
The Bald Sister
Bald Mountain 9274
Diamond King Hill
SALISBURY
Manhattan (Hist Site)
Clover Mountain
East Manhattan Wash
Mountain
Zabriskie Well (Aband)
Wells
Mines
Monarch Ranch (Hist Site)
SUMMIT
Pipe
DITCH
82

Roadless Area Name: Sagehen, #17034

Net Acres: 9030

Description

The Sagehen roadless area is in the south central portion of the Toquima Range approximately 50 miles north of Tonopah. The area is accessible by dirt roads from all sides, and lies within three miles of State Highway 82.

This area is characterized primarily by rolling, mid-elevation topography dissected by numerous washes and canyons. It contains examples of the Rugged Front and Mountain Lands, Mountain Buttress and Spur Lands, and Arid Alluvial Fan Lands. Elevations range from 7,100 feet along the south eastern boundary to 9,470 feet on the highest ridges.

The sagebrush community is the most common vegetative type in this area. Communities dominated by either pinyon-juniper or mountain mahogany are interspersed with the sagebrush.

Current uses in this area include grazing, dispersed recreation, and mineral exploration. Livestock grazing is an historic use which will be continued. Dispersed recreation includes hunting, hiking, camping and many other activities. Mineral exploration has occurred in the roadless area, and prospecting continues today. Patented mining claims lie within 1/4 mile of the boundary, attesting to the mineral potential of the surrounding area.

This unit is bordered on the east by rolling foothills which slope down to Monitor Valley. Meadow Canyon winds through the hills to the north, while country bordering the south and west sides is similar to that contained within the unit.

There are no special features within this roadless area.

Capability

The unit is surrounded by definable roads. Management problems could occur along the five roads. All the boundaries are clearly defined and there are no topographical features which could better serve as boundaries. Wilderness characteristics would not be enhanced by boundary changes. There are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of the area remains essentially intact with few man-made facilities. Some range improvements such as fences and water developments occur, and several trails made by wildlife and livestock exist. Trails are generally not maintained.

The unit generally appears natural, and existing trails do not detract from the natural appearance. The few range improvements are not detrimental to the area's appearance. Overall, this unit does not appear to be greatly influenced by man's activities.

Topographic variation within this unit is good, due to the existence of many shallow drainages and washes. However, due to the absence of vegetative cover, it is difficult to achieve a feeling of solitude. One is always aware of any activity nearby. Some feelings of isolation occur on the highest ridges due to the elevation, but the opportunity for solitude is not as great in this unit as it is in many others.

Opportunities for primitive recreation include camping, backpacking, hiking, hunting, picnicking, bird-watching, horseback riding, rock hunting, ski touring, photography, and sightseeing. Many of these activities depend on trail access to the interior of the unit. Due to the limited trail system, opportunities for all these activities are somewhat limited.

Due to the relatively moderate terrain of this area, opportunities for challenging recreational experiences are limited. Opportunities to experience self reliance are limited because the hiker is only 1-1/2 miles from a road. Camping at the higher elevations allows the recreationist to confront a somewhat hostile environment, where water is limited and the weather can be very changeable.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, short-eared owl, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. There are no sensitive plant species.

There are no unique opportunities for research or scientific study in this area.

Availability

Many types of primitive recreation are available in the Sage Hen roadless area. Hunting for upland game is probably the most popular sport, but other activites include deer hunting, horseback riding, camping, back-packing, rock hunting, picnicking, birdwatching, photography and sightseeing. Due to the lack of striking scenery, the last two activities are limited in scope.

Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. There are no figures showing current recreational use of this area; however, total annual use is believed to be quite low, less than 50 RVD's annually.

Prehistoric and historic resources have been recorded in the area and moderate sensitivity is expected.

This area supports those wildlife species tied to the pinyon-juniper and sagebrush vegetative communities, including the sensitive species listed above. Sage grouse and mourning doves occur in some of the upland meadows.

This area is contained within a single Forest Service watershed. No systematic survey of watershed conditions has been made. Overall condition appears to be fair to good. Surface water quality is impacted by livestock use. Distribution of water sources is poor, most free water is found along the northern boundary or along the roads. Some seeps occur in the interior.

The Sagehen roadless area contains portions of two livestock allotments administered by the Forest Service. Cattle graze the northern portion of the units from June to October, and the southern portion from November to June. Approximately 100 AUM's are grazed annually by one operator. The area has been grazed by livestock since at least 1870.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021) and contains primarily the Great Basin sagebrush communities with pinyon-juniper woodland in the southern portion and groves of mountain mahogany at higher elevations. Riparian habitat is represented by a few seeps and springs. Since riparian areas represent only .1% of all of the lands in Nevada, maintenance of these areas is a priority and will continue to be such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade lumber in this roadless area. Some woodcutting has occurred in the southern portion of the unit, but its effects have not been significant.

This area contains granitic intrusives and metamorphics aligned along a northwest trending shear zone. It is not associated with the Mount Jefferson calderas. There is high potential for economic deposits of gold and silver, although exploration has not yet revealed any. Patented mining claims close to the western boundary indicate that some mineralization occurs in the area.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

There is presently no burning plan for this area. No fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately-owned lands within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Sagehen. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northeast and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosytem type represented in the Sage Hen roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-I Management Prescriptions Assigned to Roadless Areas by Alternative, by M Acres: Sagehen

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							9.0		9.0
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		9.0	9.0	9.0		9.0			
Stewardship Wildlife, Range & Dispersed Rec.	9.0				9.0				
Market Opportunities (Timber and/or Grazing)								9.0	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Sagehen*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	1	0
Livestock Grazing	AUM	210	185	185	185	210	185	210	243	210
Dispersed Recreation	MRVD	1.8	3.5	3.5	3.5	1.4	3.5	3.3	1.2	3.5
Wildlife	MWFUD	.2	.6	.6	.6	.2	.6	.6	.2	.6
Wildlife Habitat Improvement	Acres	4	17	17	17	4	17	0	0	0
Fuel Management	Acres	0	16	16	16	0	16	0	6	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

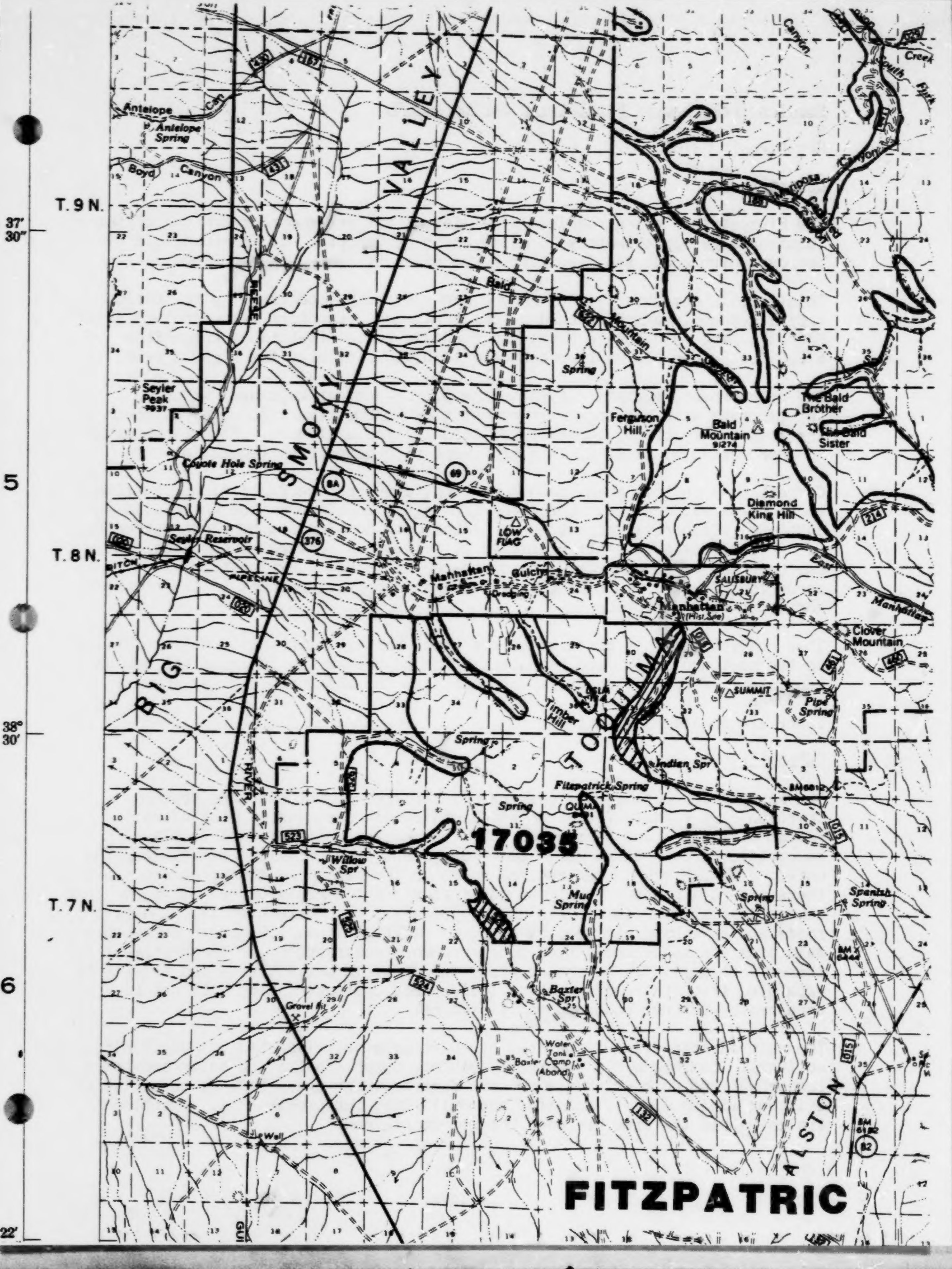
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Sagehen

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	2.0	0	2.0
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. & wood products Int./Nat. mod/high	Same as Alt. A	-----	-----	-----	---->	Int./Nat. will be high	Mining, & wood products Int./ Nat. will be mod/high	Same as Alt. F
Solitude	No change oppor. for solitude will remain low/moderate	Same as Alt. A	-----	-----	-----	-----	-----	-----	---->
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A	-----	-----	-----	-----	-----	-----	---->
Challenging Experience	Limited opportunities	Same as Alternative A	-----	-----	-----	-----	-----	-----	---->
Special Features	Not represented	Same as Alternative A	-----	-----	-----	-----	-----	-----	---->

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 170 acres of wildlife habitat improvement is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.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6
BIG SMOKY VALLEY
TOQUIMA
ALSTON
Antelope Can
Antelope Spring
Boyd Canyon
Seyler Peak
Coyote Hole Spring
Seyler Reservoir
PIPELINE
DITCH
Manhattan Gulch
Manhattan
(Hist Site)
SALISBURY
Bald Mountain
9274
Bald Mountain
Ferguson Hill
The Bald Brother
The Bald Sister
Diamond King Hill
LOW FLAG
Clover Mountain
SUMMIT
Pipe Spring
Timber Hill
Indian Spr
Fitzpatrick Spring
QUIMA
Spring
Willow Spr
Mud Spring
Spanish Spring
Baxter Spr
Gravel Pit
Water Tank
Baxter Camp (Abond)
Well
Mariposa Canyon
South Fork
Creek
Canyon
REESE RIVER
BM 6444
BM 6182
376
8A
69
82
523
524
132
015
214
161
430
431
040
020

Roadless Area Name: Fitzpatrick Spring #17035

Net Acres: 13750

Description

The Fitzpatrick Spring roadless area lies at the extreme southern end of the Toquima Range approximately 25 miles north of Tonopah. It is accessible by improved dirt roads and lies within two miles of State Highway 376.

This area is characterized by rugged mid-elevation topography, with numerous ridgelines and peaks dissected by dry drainages. Landform types include Arid Foothill Lands and Rugged Front and Mountain Lands. Elevations range from 6,200 feet along the western boundary to 8,400 feet atop the highest peak.

The predominant vegetative type is the pinyon-juniper woodland, which is interspersed with big sagebrush communities. Some desert scrub types occur at the lowest elevations, generally adjacent to valley floors. Riparian habitat is represented by small springs and seeps with associated vegetation.

Current uses in this area include grazing, dispersed recreation, woodcutting, and mineral exploration. Livestock grazing is an historic use which will continue. Dispersed recreation is centered on hunting and pine nut gathering, but includes several other primitive activites. A commercial cordwood area has been set up on the east side of the unit. Mineral exploration has occurred throughout much of this area, and is occurring today in the northern and southwestern portions.

This roadless area is bordered by Big Smoky Valley on the west, Ralston Valley on the east and south, and Manhattan Gulch on the north. Much of the boundary consists of definable roads, which separates the unit from similar country.

There are no special features.

Capability

The Fitzpatrick Spring roadless area is bordered on the east and west by improved dirt roads. The north and south boundaries consist of National Forest/Bureau of Land Management (BLM) boundaries which are not easily recognized, even when marked. Some management problems might occur along the unfenced NF/BLM boundaries and the roads in the north and south; however, there are no important topographical features which could better serve as boundaries. Two areas of less than 5,000 acres each have been isolated by roads and have been excluded by boundary modifications. The green cordwood sale area can be excluded by a minor boundary modification in the southeast corner (see map). There are no other incompatible activities which need to be separated from the roadless area. Wilderness characteristics will not be enhanced by further boundary modifications.

The natural integrity of the area has been adversely impacted by past mining activity. There are old prospects, cabins, dumps, shafts and adits scattered throughout the unit which are evident despite their age. Most of these lie on existing mining claims, and some are still used for prospecting. Livestock trails within the area are used but not maintained.

The natural appearance of the area has been adversely affected by the mining-related impacts listed above. Although these are scattered, their number and distribution creates a cumulative impact which cannot be ignored. The area does not appear natural wherever mining scars can be seen.

Due to the rugged terrain, topographic variation is excellent, providing many opportunities for solitude. Vegetative screening is also very good over much of the unit due to the predominance of pinyon-juniper woodlands. Opportunities for solitude and isolation are reduced in the lower elevation areas where vegetation is low-growing and topographic relief is less pronounced.

Opportunities for primitive recreation include hunting, camping, hiking, pine nut gathering, picnicking, birdwatching, horseback riding, rock hunting, and sightseeing. Many of these activities depend on trail access or potable water, both of which are limited. Pine nut gathering is a popular activity with local residents and is pursued on a seasonal basis.

This area provides the recreationist with the challenge of hiking or camping in rugged terrain. Due to the proximity of Manhattan, the area is not remote from all services, but the hiker must carry all his own water and be prepared for self-sufficiency on the highest ridges. Trees supply some shelter, but the weather can be quite changeable and freezing temperatures can occur at any time of the year.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. There are no threatened, endangered or sensitive plant species in the area.

There are no unique opportunities for important scientific research in this area.

Availability

Several types of primitive recreation are available in the southern Toquimas. Hunting, and pine nut gathering are the most popular activities but horseback riding, camping, hiking, backpacking, rock hunting, bird-watching, sightseeing may also be pursued. The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. There are no reliable figures showing current recreational use of this area; however, total annual use is believed to be quite low, less than 50 RVD's. This area could easily support an increase in use.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative communities, including the sensitive species listed above.

This unit is contained within two Forest Service watersheds. No systematic survey of watershed conditions has been made. Overall conditions appear to be fair. Surface water quality is impacted by livestock use. Distribution of water sources is poor since very few sources exist. Small springs and wet meadows provide some water but it is generally not sufficient for human use.

This area contains portions of two livestock allotments administered by the Forest Service. Cattle graze the area from June through September on the west side, and from November through June on the east. Approximately 25 AUM's are grazed by two operators. The area has been grazed by livestock since at least 1900.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021), and contains primarily the juniper-pinyon woodland ecosystem type. Some Great Basin sagebrush communities occur interspersed with the woodlands. Riparian habitat is represented by seeps and wet meadows with little associated vegetation. Since riparian areas represent only .1% of all lands in Nevada, maintenance of these areas is a priority and will continue as such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is commercial grade firewood in this area, and it has been selected for evaluation for cordwood quality and quantity. However, there are no commercial sales other than the site which has been excluded from the unit.

Geology is comprised of Tertiary volcanics with minor amounts of thrust faulting. Welded ash tuffs of rhyolites are common, with gold appearing both as vein and placer ore. Mineral potential in this area is considered to be high.

Historical resources are of local significance. Some prehistoric sites are known, but have not been evaluated. Although virtually no archaeological investigation has been conducted, environmental similarity with other areas indicates the potential for moderate sensitivity.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

There is presently no burning plan for this area, and no fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

There are several parcels of private land within the roadless area. These represent mining claims which were patented many years ago. Most do not have good road access.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of this unit. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area about 250 miles to the south. Use in the Jarbidge

Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Fitzpatrick Spring unit is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Fitzpatric Spring

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							13.8		13.8
Minimum Level (Custodial)					13.8				
Intensive Wildlife & Dispersed Rec.			13.8	13.8		13.8			
Stewardship Wildlife, Range & Dispersed Rec.	13.8								
Market Opportunities (Timber and/or Grazing)		13.8						13.8	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Fitzpatric Spring*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	2	1	1	1	1	0	2	0
Livestock Grazing	AUM	115	191	108	108	68	108	115	191	115
Dispersed Recreation	MRVD	2.7	1.9	5.4	5.4	1.9	5.4	5.4	1.9	5.4
Wildlife	MWFUD	.2	.2	.6	.6	.2	.6	.6	.2	.6
Wildlife Habitat Improvement	Acres	2	0	37	37	0	37	0	0	0
Fuel Management	Acres	0	2	7	7	0	7	0	2	0
Mineral Potential	H/M/L	High	High	High	High	High	High	High	High	High

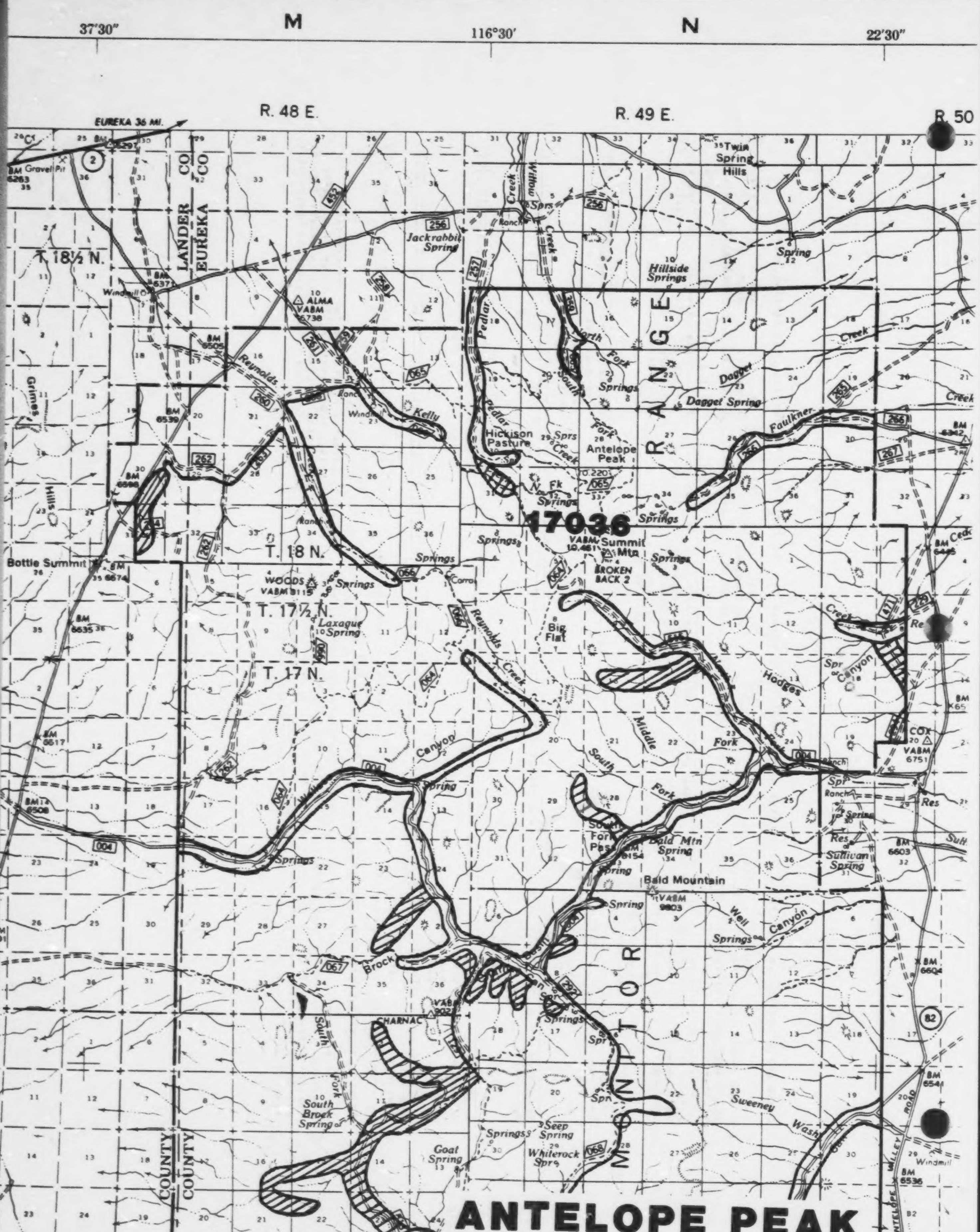
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Fitzpatric Spring

Wilderness Characteristics	(A) Currant Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	13.8	0	13.8
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. & wood products Int./ Nat. low	Mining, wood products Int./ Nat. remains low	Same as Alt. A ------------>		Wood products scheduled Int./Nat will be low	Same as Alt. A	Past mining activity. Int./Nat. will remain low	Same as Alt. B	Same as Alt. F.
Solitude	No change oppor. for solitude will remain mod/high	Same as Alt. A -->					ORV restriction solitude will remain mod/high	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A -->							
Challenging Experience	Rugged terrian provides moderate opportunity	Same as Alternative A -->							
Special Features	Not represented	Same as Alternative A -->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 370 acres of wildlife habitat improvement and 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



ANTELOPE PEAK

Roadless Area Name: Antelope Peak, #17036

Net Acres: 61425

Description

This area is located near the north end of the Monitor Range, approximately 35 miles east of Austin, Nevada. The area is a tall barren lava cone surrounded by dark forested slopes. The topography is made up of steep narrow canyons and steep rocky mountain peaks which are surrounded by low rolling foothills and alluvial fans.

The area is accessible from the north by Highway #50. Improved dirt roads run near the eastern side of the area, and along the southern boundary. Numerous dirt roads protrude into the area, and many miles of sub-standard "jeep" trails traverse the area.

The area lies within the Intermountain Sagebrush/Western Ponderosa Forest ecosystem (3130-010). Vegetation varies from stands of limber pine and aspen at higher elevations to sagebrush and pinyon-juniper covered lopes at mid-elevations to sagebursh and salt desert shrub communities in low elevation foothills and alluvial fans.

Some ridges are covered with mountain mahogany and aspen occurs along most of the streams. A wet meadow complex exists in the headwaters of the Middle Fork of Allison Creek.

Mineralization is not apparent and little exploration has occurred in the past.

Recreation use is high for central Nevada with most of it occurring during the fall hunting seasons. Sage grouse populations are high and hunting of species is very high. An estimated 1,500 RVD's of use occurs annually.

Livestock grazing is the major activity occurring on the area. Portions of three grazing allotments are within its boundaries. The majority of the use is during the summer grazing season but some winter use occurs in the southwest corner.

A wild horse territory exists in the northern half of the area. Between 10 and 15 head of horses use the territory in the spring, summer and fall.

Capability

There are no strong topographic features to provide a more definable boundary for a potential Wilderness. Unfenced Forest boundaries, the road corridors, and the many "jeep" trails would create wilderness manageability problems.

The natural integrity and appearance of the area has not been degraded significantly by man's activities. Most of the pinyon-juniper communities were logged for charcoal during the 1870's and 80's but have regenerated to the point that this activity is not obvious. Range fences and water developments detract somewhat from the naturalness of the area.

Opportunities for solitude are quite high in the upper portions of the area.

Its large size, high level of topographic screening, distances from the center to the perimeter all contribute to the chance to enjoy the solitude. Opportunities for primitive recreation and challenging experience are good for the same reasons.

No unique ecosystems or special geological features are known to exist in the area. There are numerous old charcoal pits and shelters of historical origin scattered throughout the area.

Availability

Recreation use is low during most of the year but is quite high during the fall hunting seasons. There are numerous opportunities to increase both dispersed and developed recreation in the area.

Wildlife populations are at moderate to high levels over most of the area. Plentiful water with good distribution and excellent habitat diversity contribute to this. Unique species occurring in this area are blue grouse and goshawk. Heavy concentrations of sage grouse also occur. There are many opportunities to improve wildlife habitat by thinning the pinyon-juniper, managing livestock in riparian communities, burning sage brush, and rehabilitating meadows.

There is limited potential to increase timber outputs in the area mainly because of low demand. Some small commercial Christmas tree sales could be let.

Water is generally abundant and well distributed throughout the area. Some additional water could be developed in foothill areas to help improve distribution.

The area is used for grazing cattle during both the summer and winter. Range conditions are from fair to good with moderate to high forage production potentials. There are numerous structural range improvements on the area in the form of fences and water developments. Additional fencing and water development may be necessary to better control livestock. Crested wheatgrass seedings and sagebrush spray areas exist in the northeast corner of the area (see map). Potential for additional vegetative type conversions is good.

There is limited mineral exploration activity within the area at the present time. Some seismic exploration has taken place. Potential for additional mineral activity is considered to be moderate.

Historical sites include charcoal pits and wattle and daub structures remaining from old homesteads. Virtually no archaeological investigation has been conducted. Environment is similar to the pinyon-juniper/sagebrush ecotone in other areas where prehistoric cultural resource sensitivity is known to be moderate to high. It is likely that at least resource procurement sites with moderately dense artifact assemblages occur in this unit. Currently, the significance of such sites is unevaluated.

Historical occurrence of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing Wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Western Ponderosa Forest ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Antelope Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness			61.4	61.4					
Minimum Level (Custodial)					61.4		61.4	61.4	61.4
Intensive Wildlife & Dispersed Rec.						61.4			
Stewardship Wildlife, Range & Dispersed Rec.	61.4								
Market Opportunities (Timber and/or Grazing)		61.4							
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Antelope Peak*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	0	0
Livestock Grazing	AUM	2771	3239	2467	2467	2771	3239	2467	2467	2467
Dispersed Recreation	MRVD	2.8	2.5	2.8	2.8	2.5	2.5	2.8	2.8	2.8
Wildlife	MWFUD	.9	.9	1.4	1.4	.9	.9	1.4	.8	1.4
Wildlife Habitat Improvement	Acres	0	0	0	0	0	0	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

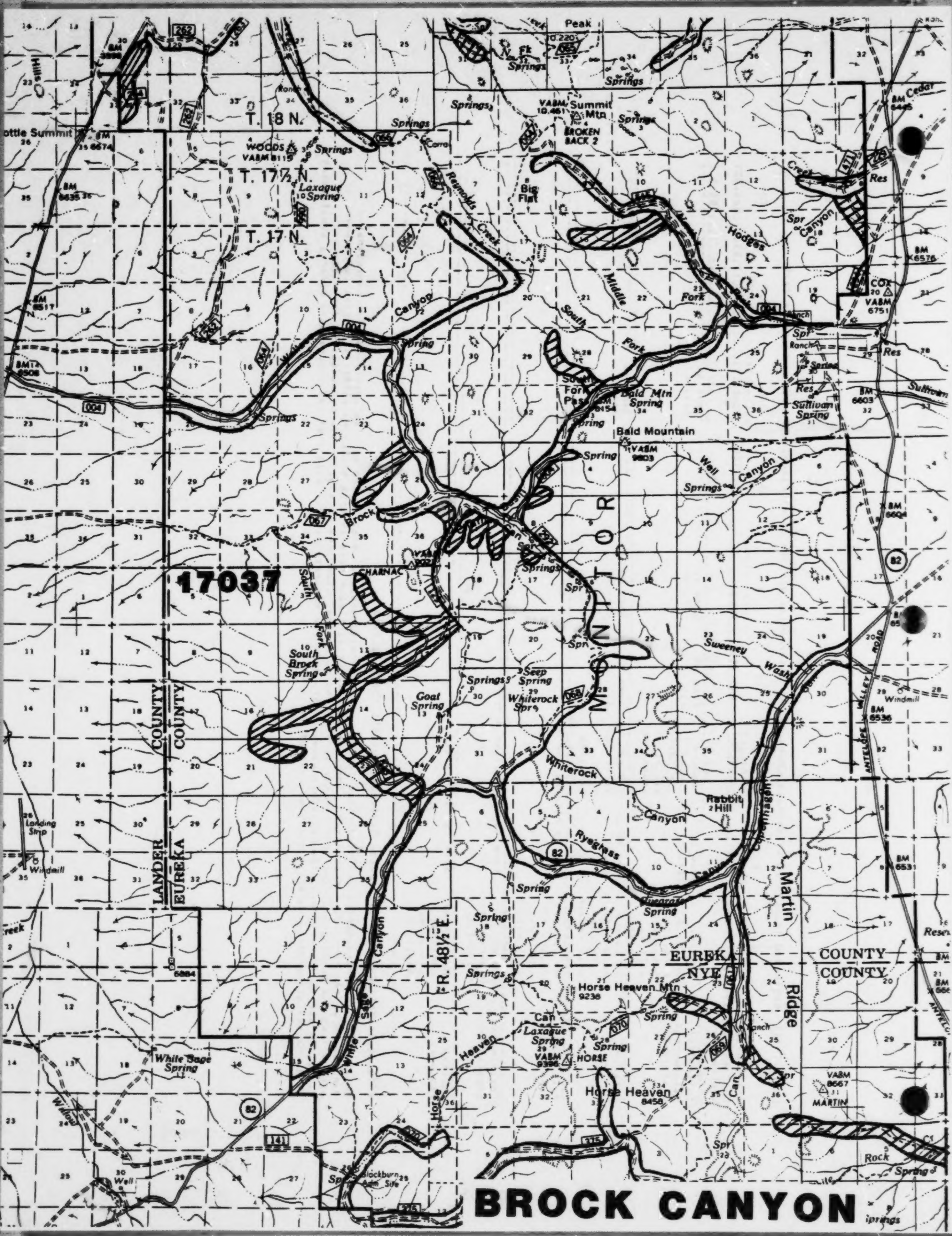
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Antelope Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	61.6	61.6	0	0	61.6	61.6	61.6
Integrity/ Naturalness (Int./Nat.)	Mining, and wood products. Int./Nat. will be mod./high	Same as Alt. A	Reduced mining Int./Nat. will increase to high	Same as Alt. C	Same as Alt. A	----------------->	Same as Alt. C	-------------------------->	
Solitude	No change oppor. for solitude will remain mod/high	Same as Alt. A	ORV restriction Oppor. for solitude will be high	Same as Alt. C	Same as Alt. A	--------------->	Same as Alt. C	------------------------>	
Primitive Recreation	No change Oppor. for prim. rec. will remain mod./high	Same as Alternative A -->							
Challenging Experience	Rugged terrain mod. opportunity	Same as Alternative A -->							
Special Features	Historical charcoal pits, rock shelters	Same as Alternative A -->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. No wildlife habitat improvement or pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



BROCK CANYON

Roadless Area Name: Brock Canyon, #17037

Net Acres: 27365

Description

The Brock Canyon roadless area is located along the west sloping foothills in the northern Monitor Range. The area is approximately 40 miles east, southeast of Austin, Nevada. The topography is characterized by rolling foothills and alluvial fans with a fairly steep ridgeline running north-south through the center of the area.

Access is from improved dirt roads forming the majority of the areas eastern boundary. Unimproved dirt roads recently developed for mineral exploration form the remainder of the eastern boundary and protrude into the interior in several locations (see map for location of recent activity). There are numerous sub-standard "jeep" trails in the southern portion of the area.

The area lies within the Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem (3130-021). Vegetation is characterized by sagebrush and salt desert shrub communities in the lower foothills and alluvial fans. Pinyon/Juniper stands cover most of the mid slope area with mountain mahogany dominating the ridgelines.

The area is fairly well mineralized especially in the middle section. There has been a significant amount of recent mineral exploration activity.

Recreation use is low. Most use occurs during the fall deer and sage grouse hunting seasons. Less than 500 RVD's of use is estimated to occur in this area.

Portions of three grazing allotments lie within this roadless area. Cattle use two of these allotments for summer grazing. The other allotment is used by cattle in the winter.

Capability

There are no good topographic features to provide a more definable boundary for a potential wilderness. Manageability problems might occur along the unfenced Forest boundary, from intrusive roads and "jeep" trails.

The natural integrity and appearance of the area has not been degraded significantly by man's activities except in the vicinity of the recent mineral exploration activity. Several livestock watering facilities and range management fences exist as well as a small part of an old crested wheatgrass seeding.

Opportunities for solitude are moderate within the area. A general lack of human activity most of the year and the level of topographic and vegetative screening contribute to the opportunities for solitude. Opportunities for primitive recreation are moderate, but the chances for a challenging experience are low. Limited rugged terrain reduces the opportunities for challenge.

No unique ecosystems or special geological are known to exist in the area.

Availability

Recreation use is low during most of the year. There are few opportunities to increase either dispersed or developed recreation.

Virtually no archaeological investigation has been conducted. The environment is similar to the pinyon-juniper/sagebrush ecotone in other areas where prehistoric sensitivity is known to be moderate to high. It is likely that at least resource procurement sites with moderately dense artifact assemblages occur in this unit. Currently, the significance of such sites is unevaluated.

Wildlife populations are low due to a lack of water and minimum habitat diversity. Some habitat improvement work, such as opening up the tree canopy, could be done in both the pinyon-juniper and mountain mahogany types. Antelope use the foothill areas of this roadless area.

There is limited potential to increase timber outputs in the area. Some small commercial Christmas tree sales could be let. Areas with trees suitable for cordwood or posts generally have terrain too steep to be harvested economically.

Water is not overly abundant in the area. Several springs, which have been developed for livestock use, exist. Most of these springs are concentrated in the center of the area leaving both ends without adequate water for maximum utilization. It does not appear that there is a potential to develop any additional water.

The area is used for grazing cattle during both the summer and winter grazing seasons. Range conditions are from poor to fair. Forage production is low due to lack of adequate precipitation. There are several structural range improvements in the area. Some water developments need to be reconstructed. There does not appear to be a need to construct any new range developments. Opportunities for doing any vegetative manipulation are minimal.

The area has active mineral exploration and a good potential exists for future mineral development.

Historical occurrence of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Juniper-Pinyon Woodland Ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Brock Canyon

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							27.4		27.4
Minimum Level (Custodial)					27.4				
Intensive Wildlife & Dispersed Rec.		27.4	27.4			27.4			
Stewardship Wildlife, Range & Dispersed Rec.	27.4								
Market Opportunities (Timber and/or Grazing)				27.4				27.4	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Brock Canyon*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	0	0
Livestock Grazing	AUM	586	577	552	613	572	613	572	613	572
Dispersed Recreation	MRVD	1.2	1.2	1.2	1.1	1.1	1.1	1.2	1.1	1.2
Wildlife	MWFUD	.4	.5	.7	.4	.4	.4	.7	.4	.7
Wildlife Habitat Improvement	Acres	25	6	10	0	25	0	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

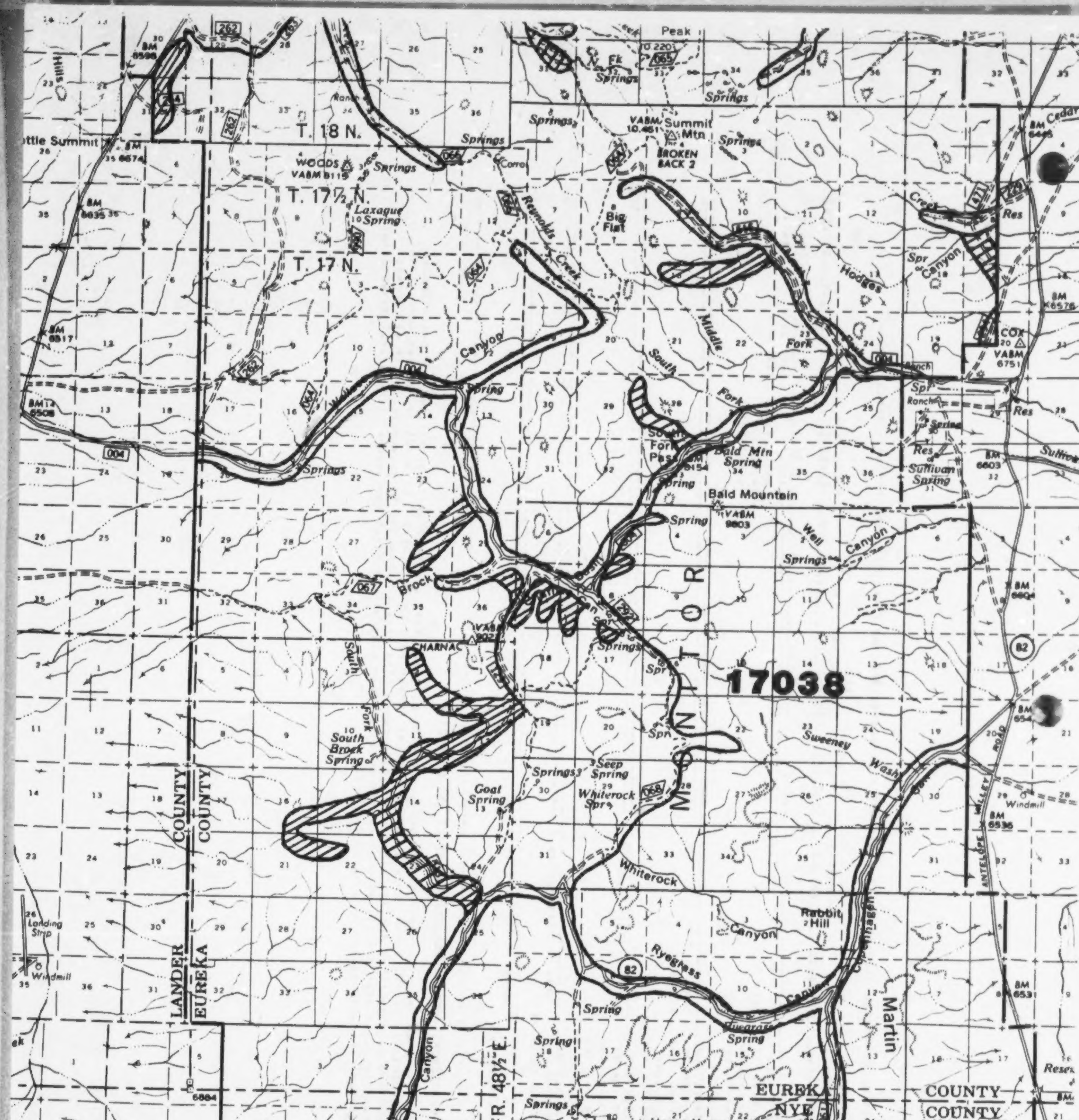
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Brock Canyon

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	27.6	0	27.6
Integrity/ Naturalness (Int./Nat.)	Wildlife habitat improvement Int./Nat. will be mod./high	Same as Alt. A					Int./ Nat. will remain mod./high	Same as Alt. A	Same as Alt. F
Solitude	No change oppor. for solitude will remain moderate	Same as Alt. A							
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A							
Challenging Experience	Limited opportunities	Same as Alternative A							
Special Features	Not represented	Same as Alternative A							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. No wildlife habitat improvement or pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has high mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



BALD MOUNTAIN

Roadless Area Name: Bald Mountain, #17038

Net Acres: 23500

The Bald Mountain roadless area is located along the crest of the Monitor Range approximately 45 miles east, south east of Austin, Nevada. The area is dry and barren.

Topography is characterized by a long flattened ridge, approximately ten miles long and one mile wide, with gently breaking canyons extending down the east and west slopes to the foothills. Elevations range from 9,8000 feet on the summit of Bald Mountain to approximately 7,5000 feet in rolling foothills.

Access to the area is by improved dirt roads forming its north and south boundaries and the unimproved dirt road which runs along its western boundary. There are several sub-standard "jeep" trails within the area. The area lies within the Intermountain Sagebrush/Juniper/Pinyon Woodland ecosystem (3130-021). Vegetation varies from high sagebrush covered ridges and plateau to pinoyn-juniper mid-slopes to sagebrush canyon bottoms and foothills.

There is very little mineralization within the area and past exploration activities have been minimal.

Recreation use is moderate, estimate at 500 RVD's. Deer and sage grouse hunting being the primary activity. Livestock grazing is the major use occurring within the area. Portions of three grazing allotments lie within its boundaries. Two of these allotments are used by cattle for summer grazing while the third is used during the winter months.

A Bureau of Land Management repeater site exists on the summit of Bald Mountain. This repeater is a key link in a communications system affecting management of approximately five million acres of land.

Capability

There are no strong topographic features to provide a more definable boundary for a potential wilderness. Manageability problems might occur along the unfenced National Forest boundary and from the "jeep" trails within the area.

The natural integrity of the area has not degraded significantly by man's activities. Several water developments for livestock and range management fences exist, but only slightly detract from the area's natural appearance.

Opportunities for solitude are fairly good in the upper portions of the area. Its large size, the level of topographic screening, and distance from the center to the perimeter all contribute to the chances of finding solitude. Opportunities for primitive recreation and challenging experiences are good for the same reasons.

No unique ecosystems or special features are known to exist in the area. The White Rock Basin in the center of the area is geologically unique.

Availability

Recreation use is minimal during most of the year. Only during the fall hunting seasons does significant use occur. There are few opportunities to increase either developed or dispersed recreation.

Some cultural resources have been recorded in this unit. Archaeological investigation has been sparse. Environmental similarity with other areas suggests at least moderate sensitivity.

Wildlife populations are low due to a lack of water and habitat diversity. Some habitat improvement could be done by burning sagebrush in certain areas and enhancing browse species in the foothills.

There is limited potential to increase timber outputs in the area primarily due to remoteness and low demand.

Water is neither abundant nor well distributed within this area. It does not appear that additional water could be developed.

The area is used for grazing cattle during the summer and winter. Range conditions are from fair to good. Forage production is low to moderate with precipitation being the limiting factor to higher productivity. There are several structural range improvements in the area. Additional improvements of this type are not presently needed. A crested wheatgrass seeding is located on the west central boundary. Some potential exists to put in additional seedings in the eastern foothills and White Rock Basin.

There is some mineral exploration in the area, and potential for future development.

Historical occurance of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

All of the area has National Forest status.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-500 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in California and Utah provde the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hunting, fishing, and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada areas 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the Wilderness System.

The Intermountain Sagebrush/Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Bald Mountain

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							23.5		23.5
Minimum Level (Custodial)					23.5				
Intensive Wildlife & Dispersed Rec.						23.5			
Stewardship Wildlife, Range & Dispersed Rec.	23.5		23.5						
Market Opportunities (Timber and/or Grazing)		23.5		23.5				23.5	
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Bald Mountain*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	0	0
Livestock Grazing	AUM	626	751	560	751	560	751	560	751	626
Dispersed Recreation	MRVD	1.1	.9	.9	.9	.9	.9	1.1	.9	1.1
Wildlife	MWFUD	.4	.4	.5	.4	.4	.4	1.1	.4	1.0
Wildlife Habitat Improvement	Acres	63	0	121	0	63	0	0	0	0
Fuel Management	Acres	0	10	0	10	0	0	0	10	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

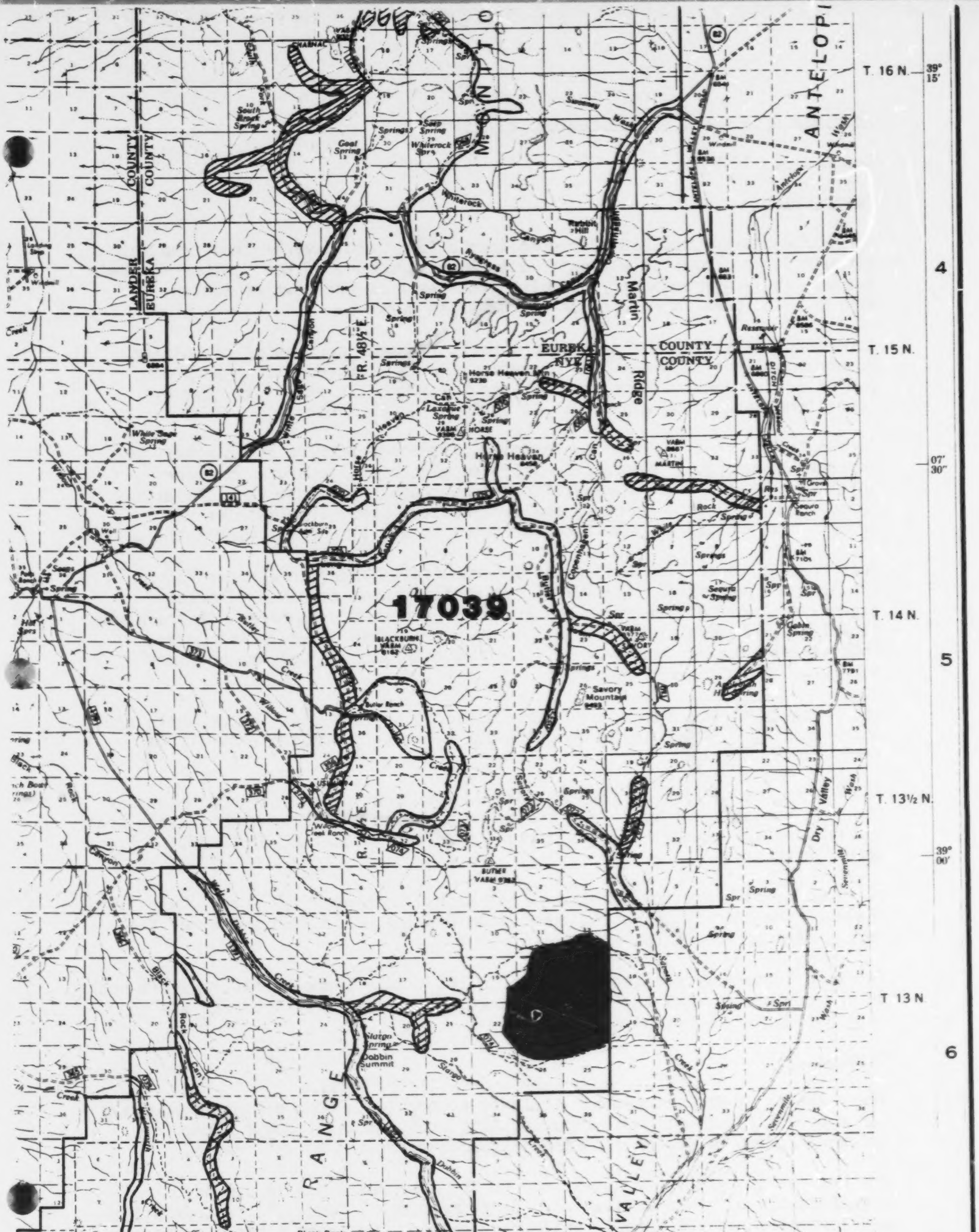
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Bald Mountain

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	23.5	0	23.5
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. Int./Nat. will be mod/high	Mining and fuel mgmt. Int./Nat. will be mod/high	Same as Alt. A	Same as Alt B	Same as Alt. A	Same as Alt. B	Reduced mining Int./Nat. will be high	Same as Alt. B	Same as Alt. F
Solitude	No change oppor. for solitude will remain mod/high	Same as Alt. A							
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A							
Challenging Experience	Limited opportunities	Same as Alternative A							
Special Features	White Rock Basin is of geological interest	Same as Alternative A							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. No wildlife habitat improvement or pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



HORSE HEAVEN

Roadless Area Name: Horse Heaven, #17039

Net Acres: 101740

Description

The Horse Heaven roadless area comprises a large and diverse land area which extends for approximtaely twenty miles along the core of the Monitor Mountain Range. It is approximately 50 miles south east of the town of Austin, Nevada. The area is rolling sagebrush-aspen parkland.

Topography is typical of much of the Monitor Range, consisting of rolling mountain uplands in the higher elevations with relatively steep and rocky canyon lands breaking from the top into the foothills and valley floor. Elevations range from approximately 7,000 to 9,8000 feet.

Access to the area is from the improved dirt roade forming its northern and southern boundaries. Numerous unimproved dirt roads protrude into the interior of the area. If several of these roads were connected, the area could be divided into numerous smaller roadless areas (see map for new roads). Many miles of sub-standard "jeep" trails also exist within the area.

This roadless area lies within the Intermountain Sagebrush/Juniper Pinyon Woodland and ecosystem (1330-021). Vegetative cover consists of broad expansive stands of sagebrush and grass interspersed with aspen, in the higher elevations. Several large wet meadow complexes also occur in this area. Lower elevations are predominantly covered with pinyon-juniper, mountain mohagany, and big sagebrush.

The majority of the area is not mineralized to any extent. The southern one third does have some mineral deposits and recent exploration activity has taken place (see map).

Recreation use is high for central Nevada with most of the use coming during the fall hunting seasons. Sage grouse populations are quite high in this area and hunting for species is very high. It is estimated that 2,500 RVD's of use occurs each year.

Portions of five grazing allotments lie within this roadless area. Cattle use three of the allotments during the summer grazing period and the other two during the winter months.

Two wild horse terriorities exist within the area. These territories are both on the eastern side of the mountain range. Twenty to thirty horses use the area during the summer months.

Capability

There are no strong topographic features to provide a more definable boundary for a potential wilderness. Manageability problems might occur along the unfenced Forest Boundary, from the intrusive roads and "jeep" trails.

The natural integrity and appearance of the area has not been degraded significantly by man's activities. Range management fences, livestock water developments, and the "jeep" trails have reduced the areas natural appearance somewhat.

There is a proposed mineral exploration in the southeast corner of the area approved in early 1985. This exploration area would effectly loose its roadless character.

Opportunities for solitude are quite high in the upper portions of the area. Its large size, high level of topographic screening, and distances from the center to the perimeter all contributes to the chance to enjoy the solitude. Opportunities for primitive recreation and challenging experience are good for the same reasons.

No unique ecoystems or special geological features are known to exist in the area.

Availability

Recreation use is low during most of the year, but is very high during the fall hunting seasons. There are many opportunities to increase both dispersed and developed recreation within the area.

Historic and prehistoric cultural resources have been recorded but not formally evaluated. Environmentally similar to other areas of known archaeological sensitivity, it is expected that prehistoric resource procurement sites can be found throughout the area.

Wildlife populations are at moderate to high levels with good species diversity. An abundance of water and excellent habitat diversity contribute to this. Several unique species use the area including antelope, elk, goshawk and trout. There are many opportunities to improve wildlife habitat; for instance, meadows could be rehabilitated, aspen could be burned to stimulate regeneration, sagebrush could be burned to create more forage and edge, and the pinyon-juniper community could be thinned to create openings and increase forage production.

There is limited potential to increase timber outputs in the area because of its isolation and low of demand. Some commerical Christmas tree sales could be let.

Water is quite abundant and well distributed throughout the area. There is little need to develop additional supplies. There is a need to improve watershed conditions in selected areas where gullies have formed and are cutting into meadows.

The area is used for grazing cattle during the summer and winter grazing periods. Range conditions are from fair to good with forage production being at moderate to high levels. There are numerous structural range improvements in the area. There is little opportunity or need to develop additional structural improvements at this time.

There is good potential for vegetative type conversions especially sage brush burning.

In the vicinities of the most recent heavy mineral exploration activities, potential for additional exploration and development is low.

Historical occurrence of fire has been low although the potential for large brush fires exists. The majority of fires have been less than 1/4 acre in size.

Insect and disease problems do not occur on a large scale.

There is approximately 260 acres of non-National Forest lands within the Willow Creek drainage. There are no access problems associated with this land.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, which is 200-250 miles N.E. of the area. Closer wilderness areas lie in California about 150 miles west in the Sierra Nevada. These areas and those in southern California and Utah provide the closest opportunities for a wilderness visit for Nevada citizens. Wilderness uses include backpacking, hiking, hunting, fishing and horse back riding. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

The nearest population centers are the Reno/Carson City, Nevada areas 150 miles west and the Las Vegas, Nevada area 250 miles to the south.

During the RARE I and central Nevada land use planning process, little local or non-local support was expressed for adding this area to the wilderness system.

The Intermountain Sagebrush/Juniper-Pinyon Woodland ecosystem type is common throughout Nevada, and is probably not needed to represent this type of ecosystem.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Horse Heaven

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							101.7	101.7	101.7
Minimum Level (Custodial)					101.7				
Intensive Wildlife & Dispersed Rec.		101.7	101.7			101.7			
Stewardship Wildlife, Range & Dispersed Rec.	101.7								
Market Opportunities (Timber and/or Grazing)				101.7					
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Horse Heaven*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	5	5	5	9	5	5	0	0	0
Livestock Grazing	AUM	1787	1685	1685	2194	1787	1848	1848	1848	1848
Dispersed Recreation	MRVD	4.6	6.9	6.9	4.1	4.1	4.6	6.9	6.9	6.9
Wildlife	MWFUD	1.8	5.0	5.0	1.8	1.8	1.8	5.0	5.0	5.0
Wildlife Habitat Improvement	Acres	177	92	92	0	150	177	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Low	Low	Low	Low	Low	Low	Low	Low	Low

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Horse Heaven

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS $/ACRE	0	0	0	0	0	0	101.7	101.7	101.7
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. and wood products Int./Nat moderate	Same as Alt. A	Same as Alt. A	Mining and wood products Int./Nat remains moderate	Same as Alt. A	Same as Alt. A	Reduced mining Int./Nat. will increase mod/high	Same as Alt. F	Same as Alt. F
Solitude	No change oppor. for solitude will remain mod/high	Same as Alt. A ------------------------------------>					ORV restriction will increase solitude to high	Same as Alt. F ------------>	
Primitive Recreation	No change Oppor. for prim. rec. will remain moderate	Same as Alternative A -->							
Challenging Experience	Mod/high opportunities	Same as Alternative A -->							
Special Features	Not represented	Same as Alternative A -->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 1170 acres of wildlife habitat improvement and 50 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision. The area has low mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.

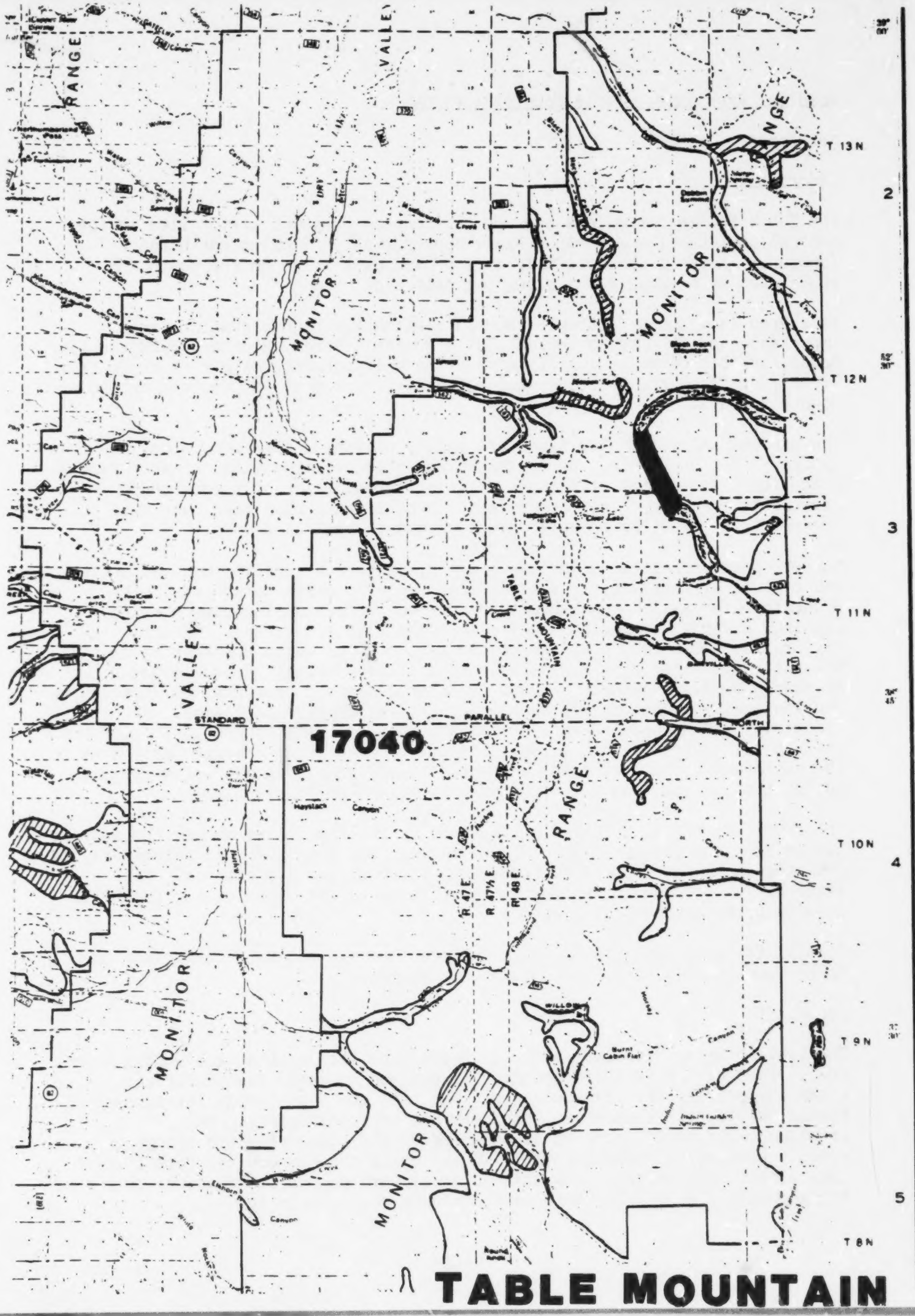


TABLE MOUNTAIN

Roadless Area Name: Table Mountain, #17040

Net Acres: 166920

Description

The Table Mountain roadless area on the Tonopah Ranger District lies in the central portion of the Monitor Range approximately 60 miles northeast of Tonopah. The area is accessible by improved dirt roads on the north and south, and by several roads along the east side.

This area is a rough rectangle encompassing mostly high elevation lands. Important land form types include Table Mountain Lands, Mountain Buttress Spur Lands, and Dip Slope and Cliff Lands. The unit consists of a flat range from 7,000 feet along the east and west boundaries to almost 10,000 feet on Table Mountain itself.

The predominant vegetative types are aspen, pinyon-juniper woodlands, mountain mahogany, big sagebrush, low sagebrush and meadow communities. Limber pine is often found associated with aspen. It is unknown which of these species represents the true climax community. Large aspen groves ocur over much of the mountain, creating an environment unique in central Nevada.

Current uses in this area include grazing, dispersed recreation, woodcutting, and mineral exploration. Livestock grazing is an historic use of Table Mountain which will be continued. Dispersed recreation includes hunting, fishing, hiking, camping and many other primitive activities. Mineral exploration has been proceeding on the east side of Table Mountain since 1979, and interest in the area's mineral potential is growing. Roads in Green Monster, Sawmill and Tulle Canyons (indicated on map) have been constructed to provide access to claims representing excellent mineral prospects. A commercial green cordwood area was established in the southern portion of the unit in 1979 (see map) and is still in use. Roads in the Morgan Basin area in the northwest corner (see map) were probably originally constructed for administrative use, and are still used by miners and recreationists.

The roadless area is bordered on the west by Monitor Valley and on the east by Little Fishlake Valley. Table Mountain gives the impression of impregnability from the east, where it is buttressed by steep slopes and rimrock. The western view provides a gentler, more inviting aspect with rolling foothills leading up to the central plateau.

Special features on Table Mountain include five streams with fisheries, the Rocky Mountain elk herd, and outstanding scenery.

Capability

The Table Mountain roadless area is bordered on the north by the Dobbin Summit road. Most of the southern boundary is defined by roads except for about 4 miles surrounding the cordwood area. The east and west boundaries consist of Forest Service/BLM boundaries which may not be recognizable. Management problems could occur along these unfenced FS/BLM boundaries and along the roads. Management could be simplified by using the rimrock escarpment which runs almost the length of the unit as an eastern boundary. However, such a change would probably not enhance wilderness characteristics.

A Mineral Operating Plan was submitted and approved in late 1984 that will essentually change the roadless area once exploration is initiated. This project will isolate approximately 7,000 acres along the east boundary from the roadless area. However, even with the loss of this area, the Table Mountain Roadless Area still retains its wilderness quality. A manageable boundary could be located that separates this area from the rest of the unit.

The natural integrity of the roadless area remains essentially intact with few man-made facilities. Range improvements, including fences and water developments, occur throughout the area, and several trails onto the mountain are included on the Forest trail system and are maintained only to the standard necessary to ensure public safety. Although there are many trails established by livestock, these are also used by horses, elk and deer and do not materially detract from the natural appearance of the mountain. A number of headcut structures were constructed to improve watershed conditions. The structures are of native rock and some were enclosed by aspen pole fences. Maintenance is done each year. The structures are not obtrusive and the pole fences are being allowed to slowly deteriorate.

Opportunities for primitive recreation include camping, backpacking, hiking, hunting, picnicking, birdwatching, horseback riding, rock hunting, fishing, ski touring, photography and sightseeing. Many of these activities depend on trail access to the interior of the unit, as well as on trailheads for vehicle access.

Throughout much of the unit topographic variation is excellent and provides many opportunities for solitude. Vegetation provides excellent screening in some areas, primarily on the flat table lands where aspen groves are extensive and in the lower elevation pinyon-juniper woodlands. Where the terrain is open and treeless, a feeling of solitude may occur due to the area's physical removal from the surrounding valleys. Most of this unit has the potential to provide solitude due to either vegetative or topographical screening, or a combination of both.

Table Mountain provides the recreationist with the challenge of hiking or camping in a beautiful but often hostile environment. Conditions on the mountain are moderated by the availability of tree cover for camps and the presence of water, much of which is potable. Snow can fall any day of the year, and temperatures are often low at night. The rugged cliffs and rimrock lands, and the abundance of steep slopes offers the opportunity for exhaustive hunting and hiking experiences. The recreationist must be prepared for complete self-sufficiency since medical help and services are many miles away.

Sensitive wildlife species which occur in this area include the pika, golden eagle, prairie falcon, ferruginous hawk, goshawk, sharp-shinned hawk, Coopers hawk, screech owl, long-eared owl, short-eared owl, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife.

One sensitive plant species, Frasera pahutensis, may occur in the southern portion of the unit. This species was proposed for listing with the U.S. Fish and Wildlife Service as a threatened plant. It does not appear to be threatened by current management practices on the district.

Availability

Many types of primitive recreation are available on Table Mountain. Hunting is perhaps the most popular. Other activities include hiking, fishing, horseback riding, camping, backpacking, rock hunting, picnicking, birdwatching, ski touring, photograph and sightseeing.

The Analysis of the Management Situation for the Toiyabe National Forest (AMS) indicates that demand for dispersed recreation will continue to increase. There are no reliable figures showing current recreational use of Table Mountain, but estimates using Forest Service and Department of Wildlife figures indicate that the area supports a minimum of 6065 Recreational Visitor Days (RVDs) annually. Due to the area's size and topographical variation, it is believed that Table Mountain could support additional dispersed recreation use. Recreation management will continue to center on trail maintenance.

Table Mountain supports a diverse fauna, including the sensitive wildlife species previously mentioned. An important addition to the ecosystem is the Rocky Mountain elk, introduced to the mountain in 1979. With no natural enemies and hunting prohibited, the elk numbers have grown from an initial group of 50 to almost 200 animals. It is expected that a hunt will be instituted by the Department of Wildlife in 1984 or 1985. The herd has become something of an attraction, and some local recreationists have ridden onto the mountain specifically to see the elk. Continued management of the herd will be accomplished through the Elk Management Plan now being written by the Nevada Department of Wildlife in cooperation with the Forest Service.

Portions of several watersheds are included in this area. Condition of the watersheds is generally good, but there is potential for improvement in some locations. The watershed improvement structures located on the mountain require some annual maintenance. Surface water quality is affected by the presence of domestic livestock, and most water should be boiled before drinking. Distribution of water over the mountain is excellent - there are innumerable streams, seeps and springs, many of which could provide sufficient water for drinking.

The Table Mountain roadless area includes all or portions of five different livestock allotments. Cattle graze from June to October annually. Approximately 4,600 AUMs are permitted to three operators. The area has been grazed by domestic livestock since at least 1870. A number of range improvements (primarily fences) require annual maintenance. Most of these improvements are presently accessible only by horseback. Limited wild horse use occurs along the eastern boundary.

Table Mountain is located in the Intermountain Sagebrush Ecoregion (3130-021), and contains both the juniper-pinyon woodland and the Great Basin sagebrush ecosystems. A number of different habitat types occur here. Perhaps the most impressive vegetative community is aspen. Groves of aspen occur over most of Table Mountain proper, both as riparian stringers along creeks and in more xeric sites. Aspen is interspersed with both big sagebrush and low sagebrush communities. Aspen is mixed with mountain mahogany at lower elevations in the more rugged areas on the eas and west side. The mountain has a significant number of meadows streams and seep which provide both water and forage for livestock and wildlife. Since riparian areas represent only .1% of all lands in Nevada, maintenance of these areas is a priority. The variety of habitats found in this area leads to a diverse flora and fauna. Table Mountain is a highly productive area for both livestock and wildlife in central Nevada.

This area is contained within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

Some pinyon pine and aspen harvest occurred near Mosquito Creek, on the west side of the unit, in the early 1900's. Pinyon pine is presently being harvested in the House Canyon area in the southern portion of the unit (see map) for firewood. However, there is no commercial grade timber available from this area. There are no plans for establishing additional woodcutting areas in the roadless area.

Table Mountain represents a series of thick tertiary volcanic flows characterized by rhyolites and andesites. On the east side Palezoic sediments are exposed. These sediments have been both thrust and normal faulted and provide favorable exploration targets for gold and silver. Historically, mineral exploration occurred on the east side of the mountain, from Tulle Creek to Clover Creek. Current mineral exploration is centered in Green Monster, Sawmill and Tulle Canyons, and several access roads have been constructed in those areas in the past few years. The potential for mineral development in these areas is fair to good.

A mineral operating plan that would significantly impact the roadless charactor was approved on October 24, 1984 and the decision was immediately appealed. As of April 4, 1985, no physical change has occurred. If the project is approved, 858 acres along the east boundary will be directly impacted and will isolate a total of 7,000 acres. However, this area can be effectively separated from the roadless area, and Table Mountain will still retain outstanding wilderness quality. The remaining 7,000 acres would not contain outstanding wilderness qualities on its own because of existing impacts from mining, loss of natural integrity, and lack of solitude and primitive recreation opportunities. A modified boundary that would exclude this proposal would still contain about 159,,060 acres.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

The area is known to contain numerous prehistoric sites, only some of which have been formally recorded. These sites are indicative of long-term occupation and consist of extensive lithic scatters, rock rings, and complexes of hunting blinds and drives. Additionally, there are historical sites primarily related to early homestead and mining activity and evidenced by structural remains, dumps, and abandoned equipment. The area is considered to have high archaeological sensitivity.

Table Mountain has undergone extensive prescribed burning for improvement of habitat and forage. Most of these burns have been quite successful. The area is covered by a burning plan which indicates that future burns may be desirable. At this time there are no plans for fire protection or development activities related to fire. There are no known insect or disease problems. No control projects are anticipated.

One piece of private land lies within the roadless area in Danville Canyon. This site of 38 acres includes 2 patented mining claims with a minimal access road. Manageability of the roadless area could be improved by excluding this privately-owned parcel through boundary modification.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Mount Jefferson. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area, 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVDs per year and the Hoover Wilderness has 72,000 RVDs of use.

Some non-local support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The Table Mountain area was not reevaluated during RARE II.

The primary ecosytem type represented on Table Mountain is common throughout Nevada. Table Mountain contains aspen groves on a larger scale than found in other areas, but this area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Table Mountain

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			166.9				166.9	166.9	166.9
Minimum Level (Custodial)					166.9				
Intensive Wildlife & Dispersed Rec.		166.9		166.9		166.9			
Stewardship Wildlife, Range & Dispersed Rec.	166.9								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Table Mountain*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	7	7	0	7	7	7	0	0	0
Livestock Grazing	AUM	70	53	56	53	41	56	56	56	56
Dispersed Recreation	MRVD	61.3	116.3	116.3	116.3	44.3	48.1	116.2	116.2	116.2
Wildlife	MWFUD	6.1	13.3	13.3	13.3	3.7	6.0	13.3	13.3	13.3
Wildlife Habitat Improvement	Acres	457	733	0	733	5	509	0	0	0
Fuel Management	Acres	0	99	0	99	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

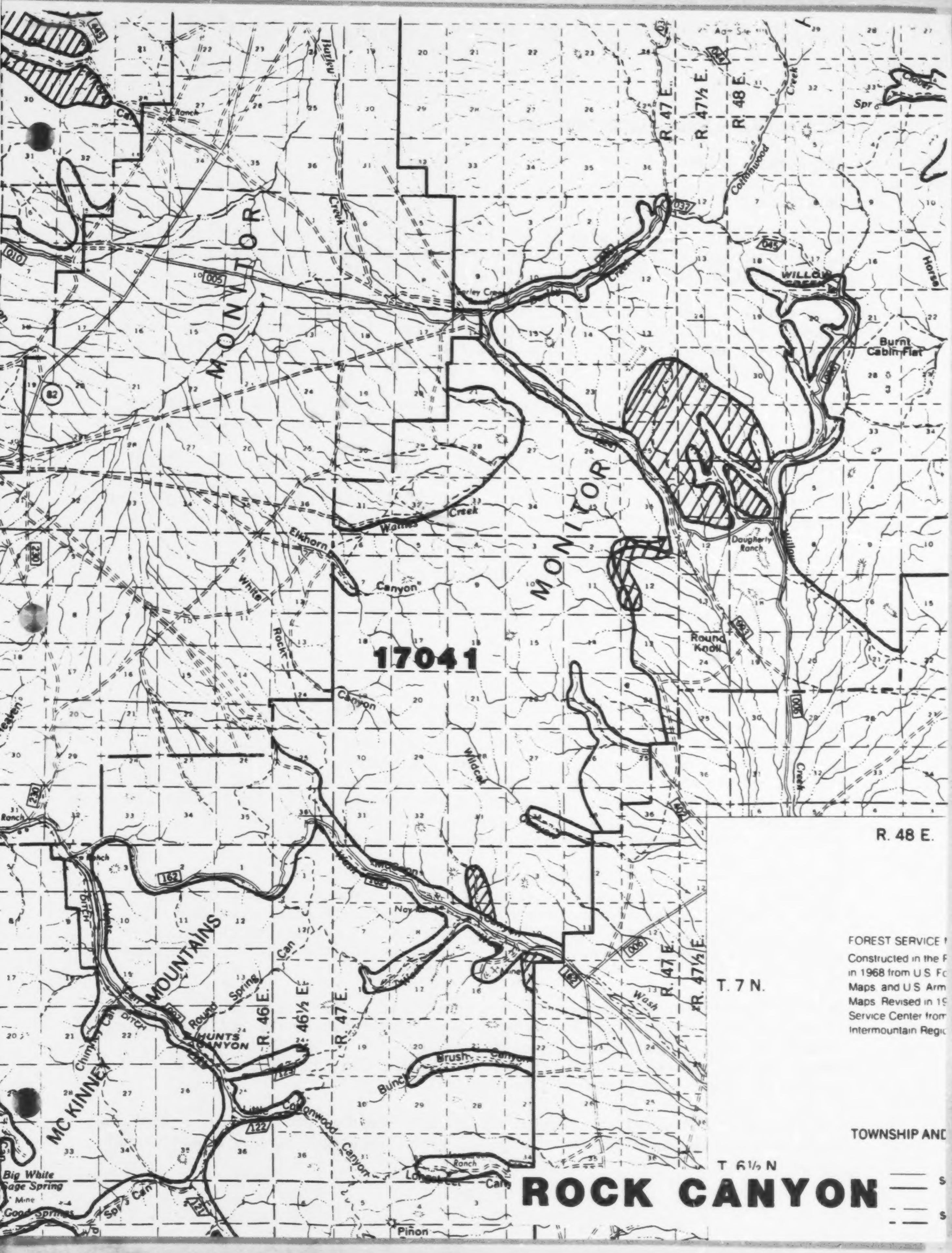
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Table Mountain

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	166.9	0	0	0	166.9	166.9	166.9
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. and wood products Int./Nat moderate	Same as Alt. A	Reduced mining Oppor. for Int./Nat. will be mod./high	Same as Alt. A	-------	------>	Same as Alt. C	-------	------>
Solitude	No change oppor. for solitude will remain mod/high	Same as Alt. A	ORV restriction Oppor. for solitude will be high	Same as Alt. A	-------	------>	Same as Alt. C	-------	------>
Primitive Recreation	No change Oppor. for prim. rec. will remain high	Same as Alternative A	-------	-------	-------	-------	-------	-------	------>
Challenging Experience	High opportunities	Same as Alternative A	-------	-------	-------	-------	-------	-------	------>
Special Features	Rocky Mt. elk herd	Same as Alternative A	-------	-------	-------	-------	-------	-------	------>

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 5090 acres of wildlife habitat improvement 70 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has low/moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area, particularly along the eastern edge.



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TOWNSHIP AND

ROCK CANYON

Roadless Area Name: Rock Canyon #17041

Net Acres: 24265

Description

The Rock Canyon roadless area is located in the Monitor Range approximately 60 miles northeast of Tonopah. The area is accessible by improved dirt roads from all sides, and lies within seven miles of State Highway 82.

This roadless area is distinguished by rugged topography and steep slopes, characteristic of the Mountain Canyon land type. Low elevation bajadas occur on the east and west sides. Elevations range from 6,600 feet along the eastern fan lands to 9,400 feet on the highest ridges.

The area is dominated by pinyon-juniper woodlands which give way to mahogany groves at the highest elevations and to sagebursh communities at the lowest.

Current uses in this area include grazing, dispersed recreation, and mineral exploration. Livestock grazing is an historic use which will be continued. Dispersed recreation includes hunting, fishing, hiking, camping and many other primitive activities. Mineral exploration has occurred.

Monitor Valley lies on the west, and Stone Cabin on the east side of this unit. Most of the boundary lies along established roads.

Special features of this area include Rocky Mountain elk and pronghorn antelope.

Capability

The Rock Canyon roadless area is bordered on the north, south and east by definable roads. The west boundary consists of National Forest/Bureau of Land Management (BLM) boundary which is not easily recognized, even when marked. Some management problems might occur along the unfenced NF/BLM boundary and the roads; however, there are no important topographical features which could better serve as boundaries. Wilderness characteristics will not be enhanced by boundary changes. There are no incompatible activites which need to be separated from the present roadless area by boundary changes.

The natural integrity of the roadless area remains intact with no man-made facilities. Some insignificant amounts of green cordwood cutting have occurred along the eastern boundary, where several commercial cordwood sale areas have been established. All trails within the unit are products of either wildlife or livestock, and do not detract from the natural appearance of the area.

Both topographic an vegetative factors contribute to screening the recreationist from outside intrusions. Some opportunities for solitude occur, primarily in the topographically dissected interior of the unit. Fewer opportunities can be found on the alluvial fans along the east and west boundaries where vegetation is low-growing.

Opportunities for primitive recreation include camping, backpacking, hiking, hunting, picnicking, birdwatching, horseback riding, rock hunting, photography and sightseeing. The quality of opportunity for many of these activities is lessened by the lack of trails and potable water, and lack of notable scenery.

This roadless area provides the recreationist with the challenge of hiking or camping in a remote area and somewhat hostile environment. Since there is little potable water, the hiker must contrive to carry what he needs. Additionally, the rugged terrain with minimal or no trails provides the opportunity for difficult and exhaustive hikes. Rock climbing is not feasible due to the nature of the rock. The recreationist must be prepared for self-sufficiency on the high ridgetops, since medical help and services are many miles away.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, Coopers hawk and great-horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive, threatened or endangered plant species are known to occur here.

Availability

Many types of primitive recreation are available in the Rock Canyon roadless area. Hunting for upland game is probably the most popular use, but other activities include deer hunting, horseback riding, camping, backpacking, rock hunting, picnicking, bird-watching, photography and sightseeing. Due to the lack of striking scenery, the last two are limited in scope.

The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. There are no figures showing current recreational use of Rock Canyon roadless area; however, total annual use is believed to be quite low, less than 50 RVD's annually.

Some prehistoric and historical cultural resources have been recorded in the unit but little formal archaeological investigation has been conducted. Given the similarity of the environment to other areas of known sensitivity, it is expected that archaeological sensitivity in this unit is moderate to high.

This area supports those wildlife species tied to the pinyon-juniper and sagebrush vegetative communities, including the sensitive species listed earlier. Rocky Mountain elk are transient residents, and pronghorn utilize the lower elevation sagebrush sites along the western alluvial fans.

This area contains portions of two National Forest watersheds. No systematic survey of watershed conditions has been made. Overall conditions appear to be good. Surface water quality is impacted by livestock use. Distribution of water sources is poor, most free water is found along the eastern or western boundaries. Some seeps occur in the interior.

Rock Canyon is included within one livestock allotment administered by the Forest Service. Cattle graze from June to October in a 4-unit, rest rotation system. One operator razes 90 to 220 AUMs annually, depending on the rest cycle. The area has been grazed by domestic livestock since at least 1870. No range improvements exist on this unit, although some occur along the roads.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021), and contains primarily the pinyon-juniper woodland ecosystem type. Some Great Basin sagebrush communities occur at the lower elevations. Mountain mahogany occurs at the higher elevations, and riparian habitat is represented by a few seeps and springs. Since riparian areas represent only .1% of all of the lands in Nevada, maintenance of these areas is a priority and will continue to be such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area. Several green cordwood sales have been established along the eastern boundary of the unit, in pinyon-juniper woodlands. Some insignificant woodcutting has occurred. No contracts have yet been issued for these cordwood areas.

This area is of primarily volcanic origin, with rhyolites and tuffs common. No mining activity occurs here presently, and potential for economic mineral development is considered to be low.

It is unlikely that any portion of this area will be required for a utility corridor or electronic sites.

There is presently no burning plan for this area, nor anticipated fire protection or development activities.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately owned lands contained within the Rock Canyon roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Rock Canyon. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northeast and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Rock Canyon roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Rock Canyon

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. E	Alt. G	Alt. H
Wilderness							24.3		24.3
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	24.3							24.3	
Market Opportunities (Timber and/or Grazing)					24.3				
Wildhorses/Wildlife & Dispersed Rec.		24.3	24.3	24.3		24.3			
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Rock Canyon*

Management Description		A	B	C	D	E	P	E	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	3	3	3	3	5	3	0	3	0
Livestock Grazing	AUM	956	857	857	857	956	857	656	956	656
Dispersed Recreation	MRVD	8.6	12.3	12.3	12.3	6.2	12.3	12.3	8.7	12.3
Wildlife	MWFUD	.8	1.9	1.9	1.9	.6	1.9	1.9	.8	1.9
Wildlife Habitat Improvement	Acres	67	74	74	74	0	74	0	67	0
Fuel Management	Acres	14	14	0	14	38	14	14	14	14
Mineral Potential	H/M/L	Low	Low	Low	Low	Low	Low	Low	Low	Low

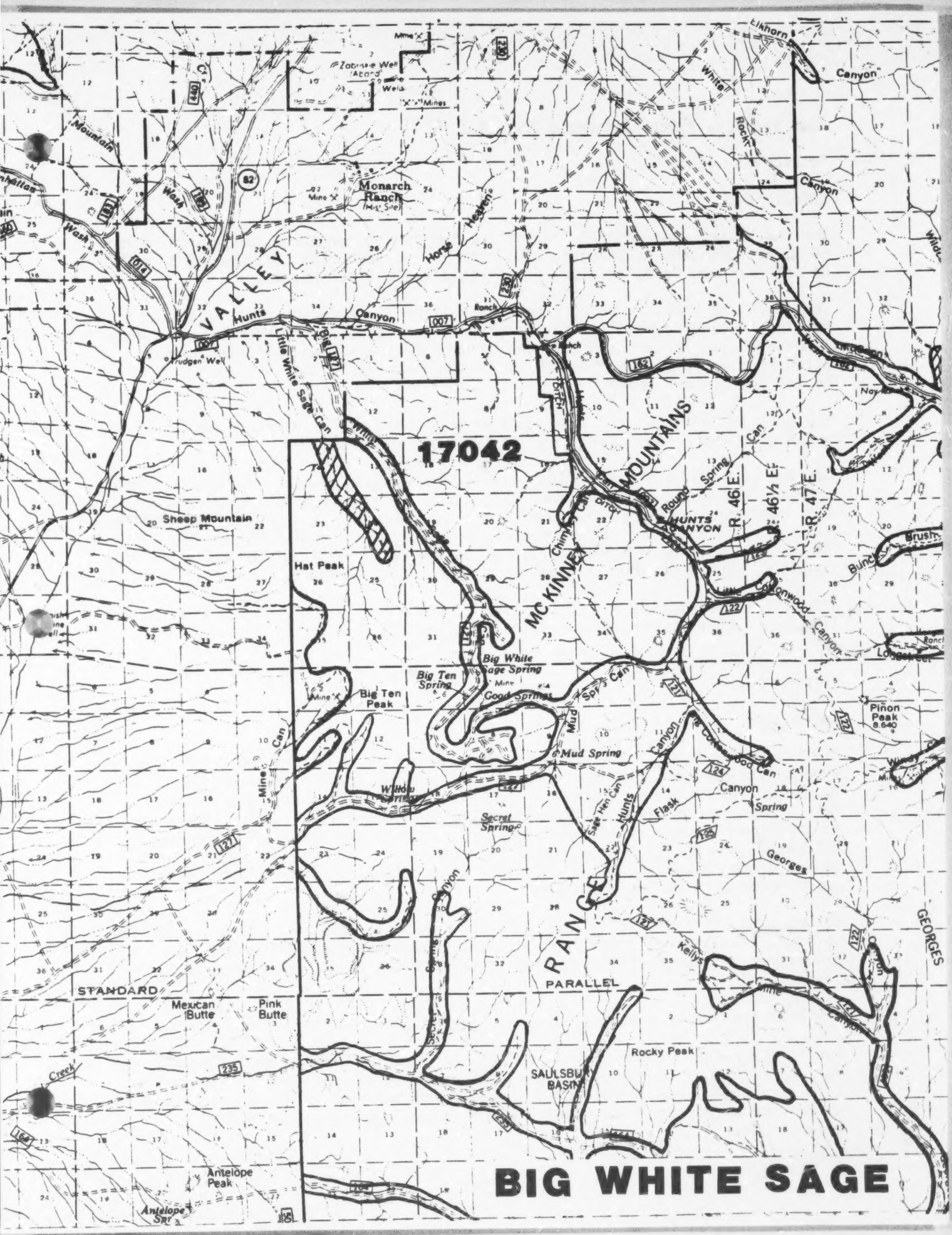
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Rock Canyon

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	26.3	0	26.3
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. and wood products Int./Nat moderate high	Same as Alt. A -------------------------->			Mining & wood products Int./Nat. mod./high	Same as Alt. A	Reduced mining Int./Nat. will increase to high	Same as Alt. A	Same as Alt. F
Solitude	No change oppor. for solitude will remain moderate	Same as Alt. A -->							
Primitive Recreation	No change Oppor. for prim. rec. will remain low/moderate	Same as Alternative A -->							
Challenging Experience	Moderate opportunities	Same as Alternative A -->							
Special Features	Rocky Mt. Elk	Same as Alternative A -->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 740 acres of wildlife habitat improvement and 30 MCF pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision. The area has low mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



BIG WHITE SAGE

Roadless Area Name: Big White Sage, #17042

Net Acres: 12265

Description

The Big White sage roadless area is located in the Monitor Range approximately 50 miles northeast of Tonopah. The area is accessible by improved dirt roads on teh east and west, and lies within 5 miles of State Highway 82.

This roadless area is characterized by rolling hills on the north, leading up to high, rugged peaks. The entire unit is comprised of the Mountainous Canyon land type. It is heavily dissected by deep drainages and shallower washes. Elevations range from 6,800 feet in the northern hills to 8,900 feet on the top of the highest peak.

The area is dominated by pinyon-juniper woodlands and sagebrush communities which give way to mahogany groves at the highest elevations.

Current uses in this area include grazing, dispersed recreation, dead firewood harvest, and mineral exploration. Livestock grazing is an historic use which will continue. Dispersed recreation includes hunting, hiking, camping and many other activities. Some commercial harvesting of dead mahogany is currently occurring. Mineral exploration has occurred along the southern boundary, and is continuing today in the southwest corner of the unit.

The unit is surrounded by similar lands, with Hunts Canyon forming the eastern boundary. Half of the boundary lies along established roads.

Special features of this area include Rocky Mountain elk and scenic rock formations.

Capability

The Big White Sage roadless area is bordered on the east and west by definable roads. The northern boundary consists of National Forest/Bureau of Land Management (BLM) boundary which is not easily recognized, even when marked. Some management problems might occur along this boundary; however, there are no important topographical features which could better serve as a boundary. Wilderness characteristics will not be enhanced by boundary changes. There are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of the roadless area remains essentially intact with few man-made facilities. Range improvements, including fences and water development, occur in the area, and several trails exist which are used by livestock.

The area appears very natural with little indication of man's activities.

Due to the nature of the terrain and the many washes and canyons, topographic variation is good and provides excellent screeing in many areas. Vegetation is a factor in areas where juniper, pine or mahogany trees are numerous enough to provide screening. Opportunities for solitude are good but not exceptional.

Opportunities for primitive recreation include camping, hiking, backpacking, hunting, picnicking, birdwatching, horseback riding, rock hunting, photography and sightseeing. Many of these activities depend on trail access to the interior of the unit, as well as on trailheads for vehicle access.

This roadless area provides the recreationist with the challenge of hiking or camping in a remote environment which can be inhospitable due to heat, cold or snow. The rugged terrain at higher elevations offers opportunities for difficult hikes and some bouldering, although rock climbing is not feasible due to the nature of the rock. The recreationist must be self-sufficient on top of the hills, but a ranch and some cabins lie within walking distance if trouble should occur. Medical help and other services are many miles away.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in coopration with the Nevada Department of Wildlife. No sensitive, threatened or endangered species of plants are know to occur here.

Availability

Many types of primitive recreation are available in the Big White Sage roadless area. Activities include hunting, horseback riding, camping, hiking, backpacking, rock hunting, birdwatching, photography and sightseeing. Use by Rocky Mountain elk in winter will undoubtedly attract sightseers in the future.

The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. There are no figures showing current recreational use of this area; however, total annual use is believed to be quite low, less than 50 RVD's.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative communities, including the sensitive species listed above. In addition, Rocky Mountain elk use this unit as part of their winter range and are very visible at certain times of the year. This herd has become something of an attraction in the Tonopah area and sightseers are attracted to this area to view the elk.

This unit contains portions of two National Forest watersheds. No systematic survey of watershed conditions has been made, although overall condition appears to be fair to good. Surface water quality is impacted by livestock use. Distribution of water sources is poor, most free water is found in small springs or seeps.

Big White Sage roadless area contains portions of two livestock allotments administered by the Forest Service. Cattle graze the northwestern portion from January through May, and the eastern portion from June through September. Approximately 290 AUM's are grazed annually by two operators. The area has been grazed by domestic livestock since at least 1870.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021), and contains the juniper-pinyon and Great Basin sagebrush ecosystems. Groves of mountain mahogany occur at higher elevations.

Riparian habitat is represented by seeps and springs. Since riparian areas represent only .1% of all lands in Nevada, maintenance of these areas is a priority and will continue as such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area. A small quantity commercial firewood permit has been issued to one operator for dead wood, primarily mahogany, in Big White Sage Canyon. Such use is minimal in scope and environmentally insignificant.

This area is of volcanic origin and lies adjacent to the Big Ten Peak caldera. Rock types are welded tuffs and rhyolites. The light colored tuffs provide scenic formations within the unit. There is moderate potential for disseminated and vein deposits of gold and silver.

Some historical resources occur in this unit, primarily connectd with with early 20th century mining exploration. These resources include cabins, dumps, and associated artifacts. Prehistoric sensitivity is expected to be moderate to high based on comparisons with similar environments of known sensitivity.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

There is presently no burning plan for the area. No fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately owned lands contained with this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Big White Sage. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Big White Sage roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Big White Sage

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							12.3		12.3
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	12.3								
Market Opportunities (Timber and/or Grazing)		12.3		12.3	12.3			12.3	
Wildhorses/Wildlife & Dispersed Rec.			12.3			12.3			
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Big White Sage*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	334	531	303	531	531	531	318	531	318
Dispersed Recreation	MRVD	1.0	.7	1.6	.7	.7	.7	1.6	.7	1.6
Wildlife	MWFUD	1.1	.2	.4	.2	.2	.2	.4	.2	.4
Wildlife Habitat Improvement	Acres	10	0	11	0	0	0	0	0	0
Fuel Management	Acres	16	16	16	16	16	16	16	16	16
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

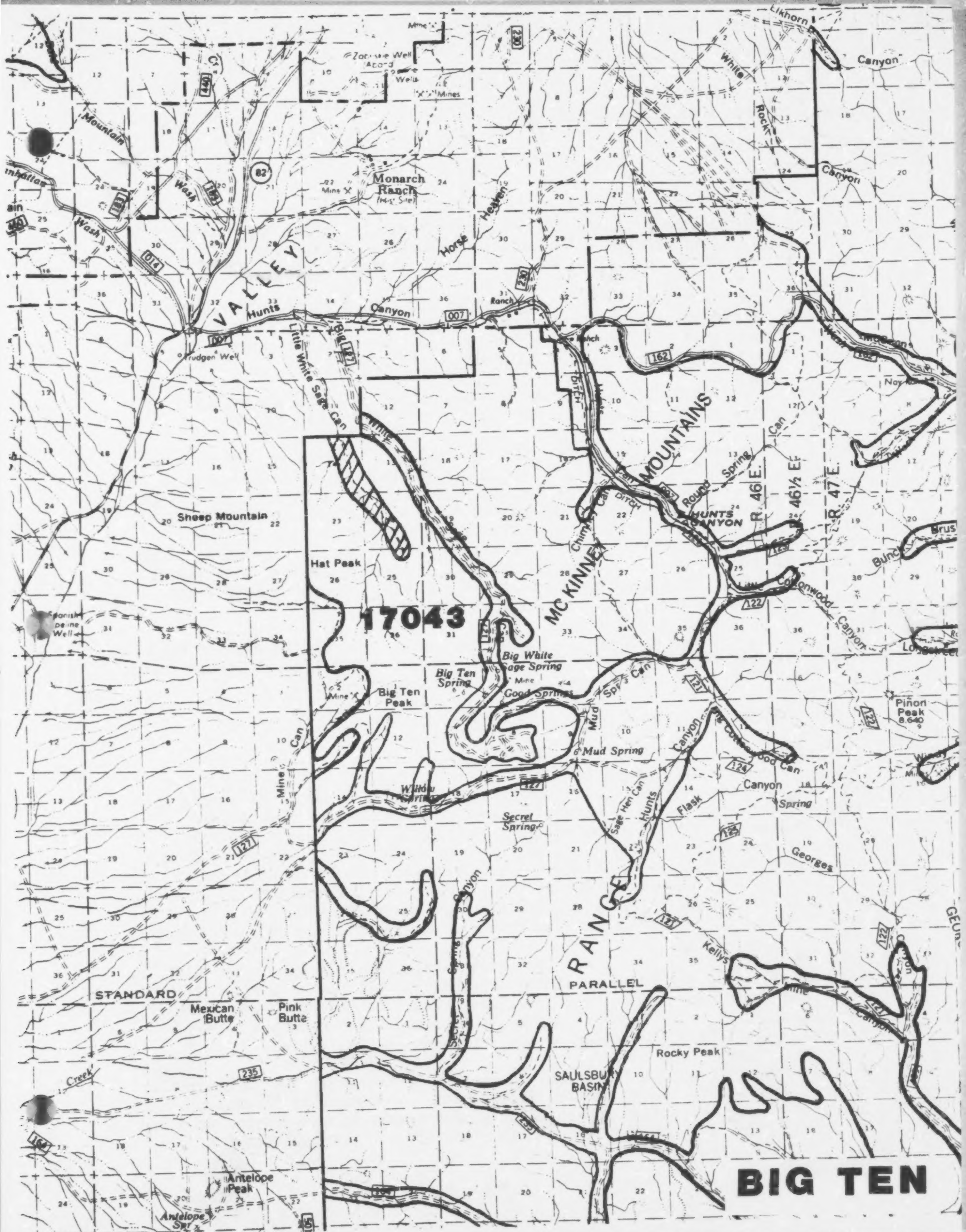
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Big White Sage

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	C	0	0	0	0	12.3	0	12.3
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. and wood products Int./ Nat. mod./high	Mining & wood products Int./ Nat remains mod/high	Same as Alt. A	Same as Alt. B --------->			Reduced mining Int./Nat. will increase to high	Same as Alt. B	Same as Alt. F
Solitude	No change oppor. for solitude will remain moderate	Same as Alt. A --------->							
Primitive Recreation	No change Oppor. for prim. rec. will remain low/mod.	Same as Alternative A --------->							
Challenging Experience	rugged terrian mod. opportunity	Same as Alternative A --------->							
Special Features	Rocky Mountain Elk	Same as Alternative A --------->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 10 MCF pinyon cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.


BIG TEN
17043
MC KINNEY MOUNTAINS
RANGE
VALLEY
Hunts Canyon
HUNTS CANYON
Monarch Ranch (Hist. Site)
Horse Heaven
Mountain Wash
Zoro Well
Wells
Mines
Elkhorn Canyon
White Rock Canyon
Little White Sage Can
Big White Sage Spring
Big Ten Spring
Big Ten Peak
Good Springs
Mud Spring
Mud Spr's Can
Willow Spring
Secret Spring
Hat Peak
Sheep Mountain
Spanish Springs Well
Trudgen Well
Chimney Can
Round Spring Can
Ditch
Ranch
Little Cottonwood Canyon
Cottonwood Can
Pinon Peak 8,640
Flask Canyon
Sage Hen Can
Georges Canyon
Kellys
Canyon
Spring Canyon
Mine Can
Secret
Mexican Butte
Pink Butte
STANDARD
PARALLEL
Rocky Peak
SAULSBURY BASIN
Antelope Peak
Antelope Spr
Creek
R. 46 E.
R. 46½ E.
R. 47 E.
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121
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82

Roadless Area Name: Big Ten, #17043

Net Acres: 8725

Description

The Big Ten roadless area lies in the southern Monitor range approximately 50 miles northeast of Tonopah. The area is accessible by improved dirt roads on the east and south and lies within five miles of State Highway 376.

This area is characterized by rolling hills and steep, rugged mid-elevation peaks dissected by numerous drainages. Primary land types include Arid Alluvial Fan Lands and Mountainous Canyon Lands. Elevations range from 6,800 feet on the northern border to 8,900 feet atop Big Ten Peak.

Pinyon-juniper woodlands and sagebrush communities dominate the vegetation, giving way to groves of mountain mahogany at the higher elevations.

Current uses in this area include grazing, dispersed recreation, dead wood harvest, and mineral exploration. Livestock grazing is an historic use which will continue. Dispersed recreation includes hunting and several other types of primitive activities. Some commercial harvesting of dead mahogany is occurring. Mineral exploration occurred along the western and southern borders historically, and is still occurring in those areas as well as along the southeaster border. A road, constructed for mining related activities, approximately 2 1/2 miles long up Little White Sage Canyon has been deleted from the roadless area, see cross-hatched area on map.

The unit is bordered on the west by Ralston Valley, and on the east by Big White Sage Canyon. Surrounding lands are similar in character to those found in this unit. Approximately half of the boundary is roaded.

A special feature of this area is Rocky Mountain elk.

Capability

The Big Ten roadless area is bordered on the south and east by definable dirt roads. The north and west boundaries consist of National Forest/Bureau of Land Management (BLM) boundary which is not easily recognized, even when marked. Some management problems might occur along this boundary and along the several roads; however, there are no important topographical features which could better serve as boundaries. Wilderness characteristics will not be enhanced by boundary changes, and there are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of the roadless area remains essentially intact with few man-made facilities. Some old mining scars exist, but they are relatively minor and their impacts are very localized. There are no range improvements, but a few trails exist and are used by livestock. The area appears very natural, with little indication of man's presence or activities.

At the higher elevations topographic variation is excellent due to the number of drainages and the rapid elevational changes. Variation is minimal on the alluvial fans. Vegetative screening is good wherever pinyon-juniper woodland is found, primarily the middle and high elevations. Opportunities for solitude vary with the amount of topographic and vegetative screening, but are generally good in the canyon lands and fair to poor on the alluvial fans.

Opportunities for primitive recreation include hunting, camping, hiking, horseback riding, rock hunting and picnicking. Many of these activities depend on trail access to the interior of the unit and occurrence of potable water. Due to the marginal trail system and the lack of potable water, the quality of recreational opportunity in this unit is limited.

This roadless area provides the recreationist with the challenge of hiking or camping in a remote environment which can be inhospitable due to heat, cold and lack of water. The rugged terrain at higher elevations offers opportunities for difficult hikes. The recreationist must be self-sufficient on the peaks, but a ranch and cabins lie within walking distance if trouble should occur. Medical help and services are many miles away.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive, threatened or endangered species of plants are known to occur here.

Availability

Types of recreation available in the Big Ten roadless area include hunting, horseback riding, camping, hiking and rock hunting. Due to the area's use by Rocky Mountain elk in winter, the herd will undoubtedly attract sightseers in the future.

The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. There are no figures showing current recreational use of this area; however, total annual use is believed to be quite low, less than 50 RVD's.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative communities, including the sensitive species listed above. In addition, Rocky Mountain elk use this unit as part of their winter range and are very visible at certain times of the year. This herd has become something of an attraction in the Tonopah area and sightseers are attracted to this area to view the elk.

This unit contains portions of two National Forest watersheds. No systematic survey of watershed conditions has been made. Overall conditions appears to be fair to good. Surface water quality is impacted by livestock use. Distribution of water sources is poor, most free water is found in small springs or seeps.

Big Ten roadless area is contained within one livestock allotment administered by the Forest Service. Cattle graze from June through September. Approximately 20 AUM's are grazed annually by one operator. The area has been grazed by livestock since at least 1870.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021), and contains the juniper-pinyon and Great Basin sagebrush

ecosystems. Groves of mountain mahogany occur at higher elevations. Riparian habitat is represented by seeps and springs. Since riparian areas represent only .1% of all lands in Nevada, maintenance of these areas is a priority and willl lands in Nevada,
All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area. A small quantity commercial firewood permit has been issued to one operator for dead wood, primarily mahogany, in Big White Sage Canyon. Such use is minimal in scope and environmentally insignificant.

This area is of volcanic origin and portions lie within the Big Ten Peak caldera. Rock types are welded tuffs and rhyolites. Light colored welded tuffs provide scenic formations within the unit. There is moderate potential for disseminated and vein deposits of gold and silver.

Some historical resources occur in this unit, primarily connected with early 20th century mining exploration. These resources include cabins, dumps, and associated artifacts. Prehistoric sensitivity is expected to be moderate to high based on comparisons with similar environments with known sensitivity.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

There is presently no burning plan for the area. No fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately owned lands contained within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of the Big Ten unit. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wildenress during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in this roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Big Ten

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							8.7		8.7
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	8.7								
Market Opportunities (Timber and/or Grazing)		8.7		8.7	8.7			8.7	
Wildhorses/Wildlife & Dispersed Rec.			8.7			8.7			
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Big Ten*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	1	0	1	1	0	0	1	0
Livestock Grazing	AUM	92	169	81	169	169	111	91	169	91
Dispersed Recreation	MRVD	.7	.5	.8	.5	.5	.7	.8	.5	.8
Wildlife	MWFUD	.1	0	.1	0	0	.1	.1	.1	.1
Wildlife Habitat Improvement	Acres	1	0	2	0	0	1	0	0	0
Fuel Management	Acres	2	2	2	2	2	2	2	2	2
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

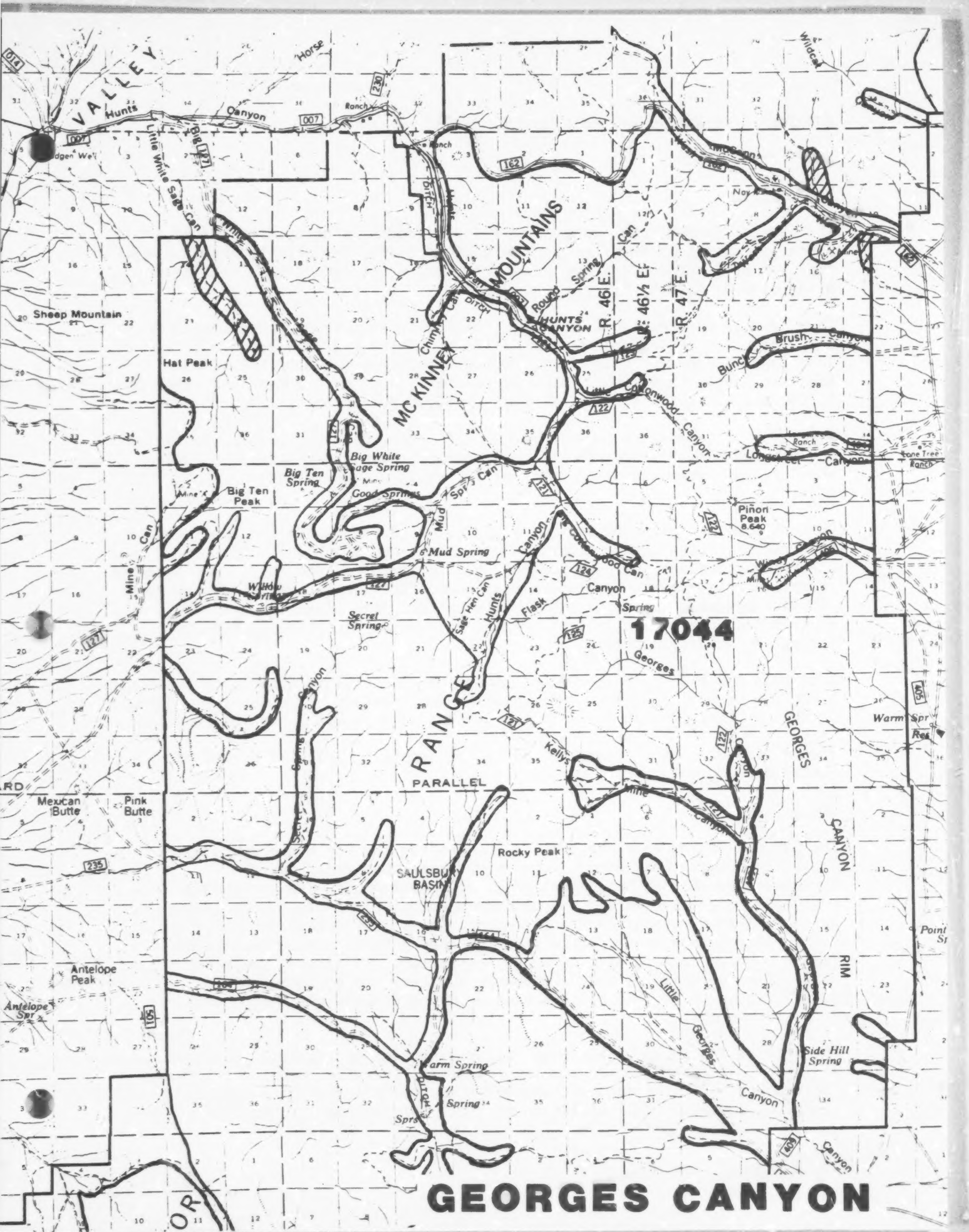
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Big Ten

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS $/ACRE	0	0	0	0	0	0	8.7	0	8.7
Integrity/ Naturalness (Int./Nat.)	Wildlife hab. impr. & wood products Int./ Nat. mod/ high	Mining & wood products Int./ Nat mod/ high	Same as Alt. A	Same as Alt. B	---------------->	Same as Alt. A	Reduced mining Int./Nat. will increase to high	Same as Alt. B	Same as Alt. F
Solitude	No change oppor. for solitude will remain low/moderate	Same as Alt. A ---------------->							
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A ---------------->							
Challenging Experience	Moderate opportunities	Same as Alternative A ---------------->							
Special Features	Rocky Mountain Elk	Same as Alternative A ---------------->							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 10 acres of wildlife habitat improvement is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



GEORGES CANYON

Roadless Area Name: George's Canyon, #17044

Net Acres: 72835

Description

The Georges Canyon roadless area lies in the southern portion of the Monitor Range approximately 40 miles northeast of Tonopah. The area is accessible by improved dirt roads along the west, north and south, and lies within seven miles of U.S. Highway 6.

This area is distinguished by rugged, high elevation topography sloping down into sagebrush basins and rimrock cliffs on the east side. Representative land types include Alluvial Fans, Mountain Buttress and Spur Lands, and Mountain Canyon Lands (which make up most of the unit). Elevations range from 6,000 feet along the eastern boundary to 8,900 feet atop the highest peak.

A variety of vegetative types occur in this area, with sagebrush communities and pinyon-juniper woodlands the most common. Mountain mahogany dominates some of the higher elevation benches, and small meadows exist throughout the unit.

Current uses in this area include grazing, dispersed recreation, and mineral exploration. Livestock grazing is an historic use which will continue. Dispersed receation includes hunting, hiking, camping, and many other types of primitive activities. Recreation use is moderate for central Nevada at about 200 RVDs annually. Mineral exploration has occurred along the northern and eastern boundaries, and is continuing today in the Windy Canyon and Mud Springs/Hunts Canyon areas.

This roadless area is bordered on the east by Stone Cabin Valley, on the north by McCann Canyon, and on the northwest by Hunts Canyon. The country adjacent on the northwest and south is similar to the unit except lower in elevation.

Special features of this are include Rocky Mountain elk, wild horses and cultural resources.

Capability

The Georges Canyon roadless area is bordered on the north and south by definable roads. The east and west boundaries consist of National Forest/Bureau of Land Management (BLM) boundaries which are not easily recognized even when marked. Some management problems might occur along the unfenced NF/BLM boundaries and the roads, especially where such roads end within less than a mile of each other. However, there are no topographical features which could better serve as boundaries. Wilderness characteristics will not be enhanced by boundary changes. There are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of the roadless area remains essentially intact with few man-made facilities. Some range improvements, including water developments and fences, have been constructed, and some trails exist which are used by livestock and wildlife. Little to no trail maintenance is done.

The unit appears very natural, with little indication of man's presence.

Due to the rugged terrain, topographic variation is excellent over much of the roadless area and provides many opportunities for solitude. Vegetation is a factor in screening in some areas, primarily pinyon-juniper sites and those with mahogany. Despite open terrain and lack of vegetation on some of the higher peaks, the height alone can provide a feeling of isolation from the world. Opportunities for solitude are therefore good throughout most of this unit.

Opportunities for primitive recreation include camping, backpacking, hiking, hunting, picnicking, birdwatching, horseback riding, rock hunting, ski touring, photography and sight seeing. Many of these activites depend on trail access to the interior of the unit, as well as trailheads for vehicle access.

This roadless area provides the recreationist with the challenge of hiking or camping in a remote environment which can be inhospitable at the higher elevations or during certain times of the year. Except for the summer, the climate is cold and changeable, with snow a possibility any time. The rugged terrain offers opportunities for difficult or exhausting hikes and some bouldering, although rock climbing is not feasible due to the nature of the rock. The recreationist must be prepared for self-sufficiency on top of the mountains, for the nearby roads are not often used and medical help and services are many miles away.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, sharp-shinned hawk, Coopers hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive plant species are known to occur here.

The Georges Canyon archaeological area might provide research potential due to it's unusually heavy accummulation of prehistoric artifacts. To date, there have been no proposals submitted for excavation or other research.

Availability

Many types of primitive recreation are available in the Georges Canyon roadless area. Hunting is perhaps the most popular use, but other activities include horseback riding, camping, hiking, backpacking, rock hunting, birdwatching, photography and sightseeing.

The Analysis of Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. There are no reliable figures showing current recreational use of this area; however, total annual use is estimated to be around 200 RVD's which is moderate for central Nevada.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative communities, including the sensitive species listed above. Sage grouse and mourning doves occur in some of the upland meadows. This area is contained within four National Forest watersheds. No systematic survey of watershed condition has been made. Overall condition appears to be fair to good. Surface water quality is impacted by livestock use. Distribution of water sources is fair, most free water is found in springs or seeps in the interior.

Georges Canyon roadless area contains portions of two livestock allotments administered by the Forest Service. Cattle graze the western portion of the unit from January to May, and the eastern portion from June through September. Approximately 415 AUMs are grazed annually by two operators. The area has been grazed by livestock since at least 1870.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021), and contains primarily the juniper-pinyon woodland ecosystem type. Great Basin sagebrush communiites occur at the lower elevations, and groves of mahogany occur on the higher benches. Riparian habitat is represented by seeps and springs. Since riparian areas represent only .1% of all the lands in Nevada, maintenance of these areas is a priority and will continue as such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area.

This area is of volcanic origin and exhibits shear faulting on an east-west alignment. Welded tuffs and rhyolites are the primary rock types. There is moderate potential for disseminated and vein deposits of gold and silver. Mineral exploration is currently occurring along the northern boundary in the head of Hunts Canyon, and in Kellys Canyon and Little Georges Canyon along the southern boundary.

The Georges Canyon Archaeological Area lies in Georges canyon adjacent to a cherry-stemmed road. This area has been recognized for its significant accumulation of prehistoric artifacts which occur in unusual densities. Such an area might attract visitors in the future. It will continue to be managed according to current Forest Service policy regarding cultural resources.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

There is presently no burning plan for this area. No fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately owned lands contained within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Georges Canyon. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVDs per year and the Hoover Wilderness has 72,000 RVDs of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Georges Canyon roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosytem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: George's Canyon

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			72.8	72.8			72.8	72.8	72.8
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	72.8								
Market Opportunities (Timber and/or Grazing)					72.8				
Wildhorses/Wildlife & Dispersed Rec.		72.8				72.8			
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: George's Canyon*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	5	5	0	0	8	5	0	0	0
Livestock Grazing	AUM	1284	1051	1185	1185	2062	1210	1210	1900	1210
Dispersed Recreation	MRVD	5.8	7.4	7.4	7.4	3.8	6.3	7.4	7.4	7.4
Wildlife	MWFUD	.7	1.4	1.4	1.4	.7	.9	1.4	1.4	1.4
Wildlife Habitat Improvement	Acres	65	71	0	0	0	67	0	0	0
Fuel Management	Acres	40	40	40	40	40	40	40	40	40
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

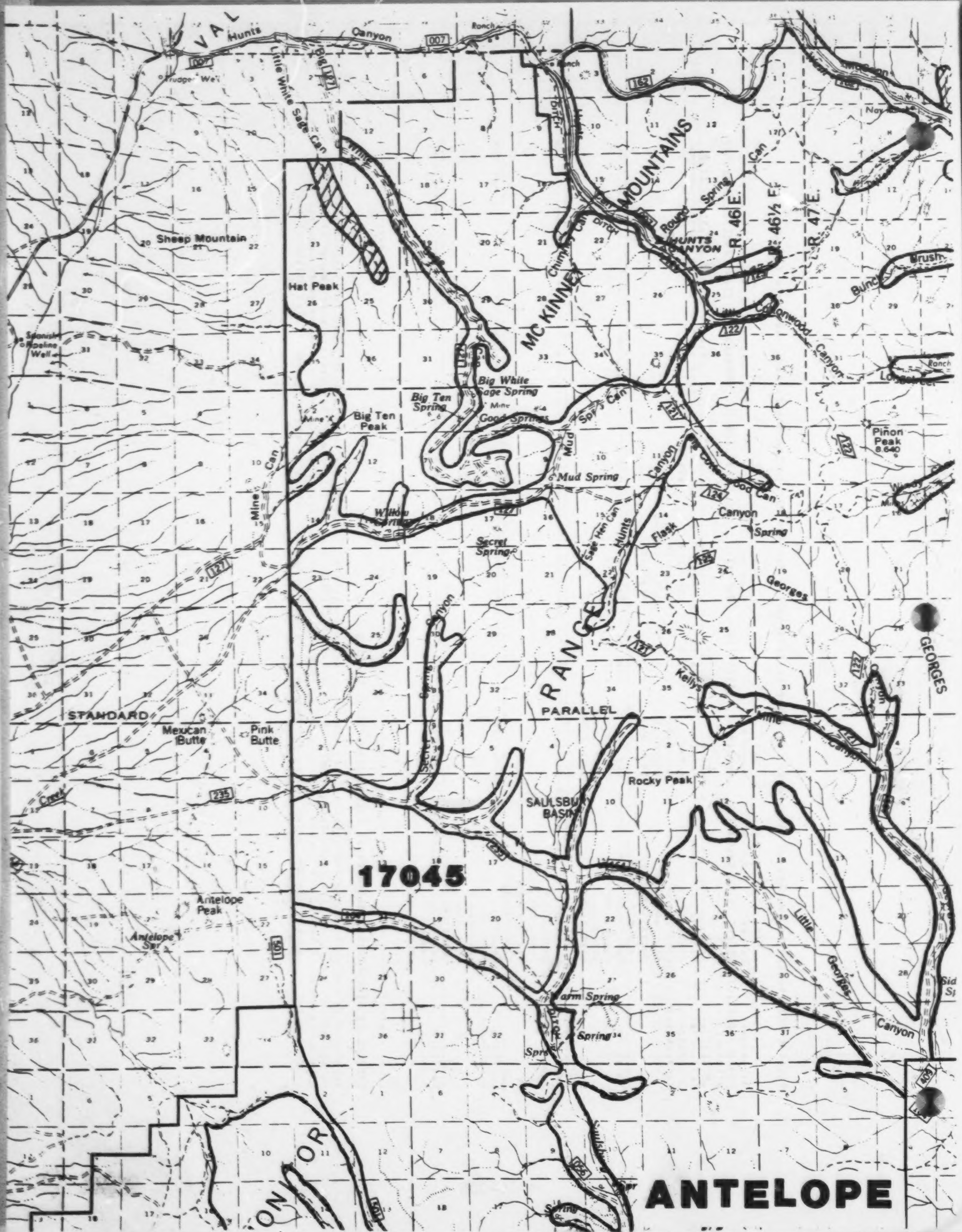
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: George's Canyon

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	22.8	22.8	0	0	22.8	22.8	22.8
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. and wood products Int./ Nat. mod./high	Same as Alt. A	Reduced mining Int./Nat. increase to high	Same as Alt. C	Mining & wood products Int./ nat. remains mod/high	Same as Alt.A	Same as Alt. C ------------>		
Solitude	No change oppor. for solitude will remain mod/high ------------>		ORV restriction solitude will increase to high	Same as Alt. C	Same as Alt. A ------------>		Same as Alt. C ------------>		
Primitive Recreation	No change Oppor. for prim. rec. will remain low/moderate	Same as Alternative A ------------>							
Challenging Experience	Rugged terrian provides moderate opportunity	Same as Alternative A ------------>							
Special Features	George's Canyon archeological area	Same as Alternative A ------------>							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 670 acres of wildlife habitat improvement and 50 MCF pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.


17045
ANTELOPE
MC KINNEY MOUNTAINS
PARALLEL RANGE
R. 46 E.
R. 46½ E.
R. 47 E.
STANDARD
GEORGES
Hunts Canyon
Little White Sage Can
Sheep Mountain
Hat Peak
Spanish Pipeline Well
Big White Sage Spring
Big Ten Spring
Big Ten Peak
Good Springs
Mud Spring
Willow Spring
Secret Spring
Mine Can
Chimney Can
Round Spring Can
Cottonwood Canyon
Pinon Peak 8,640
Flask Canyon
Sage Hen Can
Georges
Kellys Canyon
Rocky Peak
SAULSBURY BASIN
Mexican Butte
Pink Butte
Creek
Antelope Peak
Antelope Spr
Little Georges Canyon
Warm Spring
Spring
Trudger Well
Ranch

Roadless Area Name: Antelope, #17045

Net Acres: 5775

Description

The Antelope roadless area is a small unit located in the southern Monitor Range approximately 40 miles northeast of Tonopah. The area is accessible by improved dirt roads on three sides and lies within 10 miles of State Highway 376.

This area is characterized by rolling foothills and alluvial fans interspersed with wide, dry washed. Primary land types include the Arid Foothill Lands and Arid Alluvial Fan Lands. Elevations range from 6,600 feet along the western boundary to 7,550 feet atop the highest peak.

The most common vegetative type is the sagebrush community dominated by either low sagebrush or big sagebrush. Some pinyon-juniper woodlands are found at the highest elevations, but they are small in extent and poorly developed.

Current uses in this area include livestock grazing and mineral exploration. Grazing is an historic use which will continue. Mineral exploration is presently limited to prospecting, with no on-the-ground disturbances occurring or anticipated.

The unit is surrounded by similar low elevation lands, with Ralston Valley bordering it on the west.

There are no special features.

Capability

The Antelope roadless area is bordered on the north, south and east by definable roads. The western boundary consists of National Forest/Bureau of Land Management (BLM) boundary which is not easily recognized, even when marked. Some management problems could occur along this boundary; however, there are no important topographical features which could better serve as boundaries. Wilderness characteristics will not be enhanced by boundary changes, and there are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of the roadless area remains intact with no man-made intrusions. The area appears to be very natural, with no indication of man's activities.

Due to the relatively gentle terrain, topographic variation is minimal and does not provide effective screening. Additionally, the vegetation is low growing, and except in woodland areas, provides no screening at all. Overall, opportunities for solitude in this unit must be rated as poor.

Opportunities for primitive recreation are limited by the unit's arid nature, lack of topographic relief, lack of trails, water and scenic features. Very little recreational use is presently made of the area, and it is doubtful if opportunities for primitive recreation will improve the future.

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This roadless area provides little in the way of challenge for a recreationist. Hiking in a remote, arid area can be accomplished in many other units where scenic values are higher or special features occur. Opportunities for challenging recreation are minimal.

Sensitive wildlife species which occur in the area include the golden eagle, prairie falcon, ferruginous hawk and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines listed to the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive, threatened or endangered species of plants are known to occur here.

Availability

Current recreational use in this area is quite low, less than 50 RVDs annually. The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. This unit could sustain a significant increase in recreational use.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetation communities, including the sensitive species listed above. Additionally, pronghorn antelope have been sighted in the valley adjacent to the western boundary. Pronghorn populations in this area are known to be low and use is probably very light.

This unit contains portions of two National Forest watersheds. No systematic survey of watershed conditions has been made. Overall condition appears to be fair to good. Surface water quality is impacted by livestock use. There are very few water sources within the unit.

Antelope roadless area is contained within one Forest Service livestock allotment. Cattle graze approximately 15 AUMs from January through May annually. One operator has a permit. The area has been grazed by domestic livestock since at least 1870.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021), and contains primarily the Great Basin sagebrush ecosystem, with some pinyon-juniper ecosystem types. Riparian habitat is essentially non-existent, consisting of very limited communities surrounding intermittent seeps.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area.

This area is of volcanic origin and lies close to the Big Ten Peak caldera. Rock types are welded tuffs and rhyolites. The light colored tuffs provide scenic formations within the unit. There is moderate potential for disseminated and vein deposits of gold and silver.

Although little formal archaeological investigation has been conducted, extensive prehistoric sites are known to occur in the area. Archaeological sensitivity is expected to be high.

It is unlikely that any portion of this area will be required for utility corridors or electronic sites.

There is presently no burning plan for the area. No fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

There are no privately owned lands contained within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of the Antelope unit. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Antelope roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Antelope

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							5.8		5.8
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	5.8								
Market Opportunities (Timber and/or Grazing)		5.8		5.8	5.8			5.8	
Wildhorses/Wildlife & Dispersed Rec.			5.8			5.8			
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Antelope*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	0	0
Livestock Grazing	AUM	40	76	36	76	76	36	40	76	40
Dispersed Recreation	MRVD	.5	.3	.5	.3	.3	.5	.5	.3	.5
Wildlife	MWFUD	0	0	.1	0	0	.1	.1	0	.1
Wildlife Habitat Improvement	Acres	0	0	0	0	0	0	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

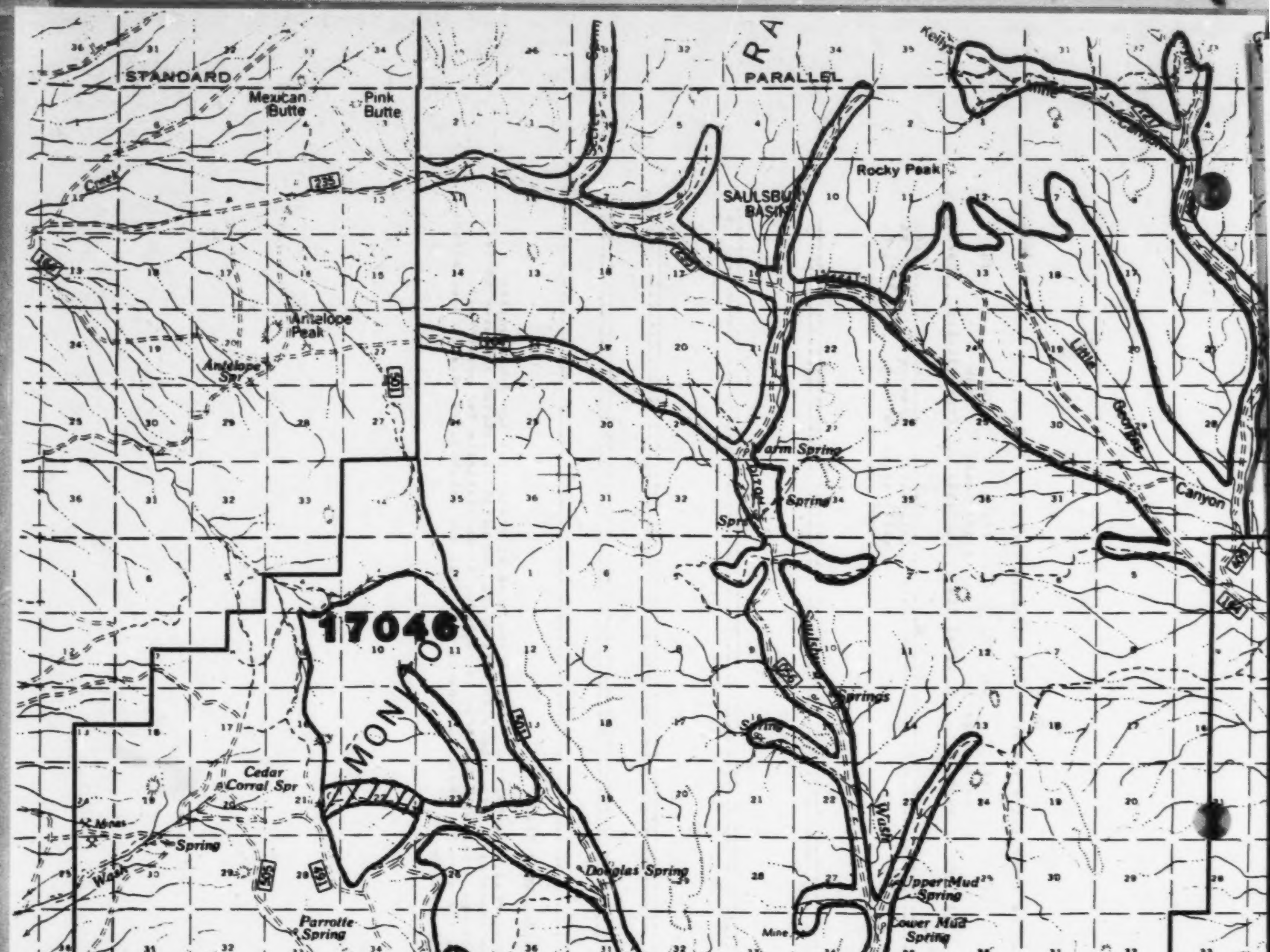
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Antelope

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNW
WILDERNESS M/ACRE	0	0	0	0	0	0	5.8	0	5.8
Integrity/ Naturalness (Int./Nat.)	Wood products scheduled Int./Nat. will be high	Same as Alt. A	------------------------------------>				Int./Nat. will remain high	Same as Alt. A	Same as Alt. F
Solitude	No change oppor. for solitude will remain low	Same as Alt. A	------------------------------------>						
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A ------------------------------------>							
Challenging Experience	Limited opportunities	Same as Alternative A ------------------------------------>							
Special Features	Not represented	Same as Alternative A ------------------------------------>							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. No wildlife habitat improvement of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



CEDAR CORRAL

117°00' G 52'30"

Longitude west from Greenwich

Roadless Area Name: Cedar Corral, #17046

Net Acres: 3845

Description

The Cedar Corral roadless area lies in the southermost portion of the Monitor Range approximately 20 miles northeast of Tonopah. It is entirely bordered by dirt roads. The unit lies about five miles from U.S. Highway 6.

Topographic relief is provided by rolling Foothills Lands. Elevational range is unsure due to a lack of topographic map coverage, but probably is from 6,000 to 7,500 feet.

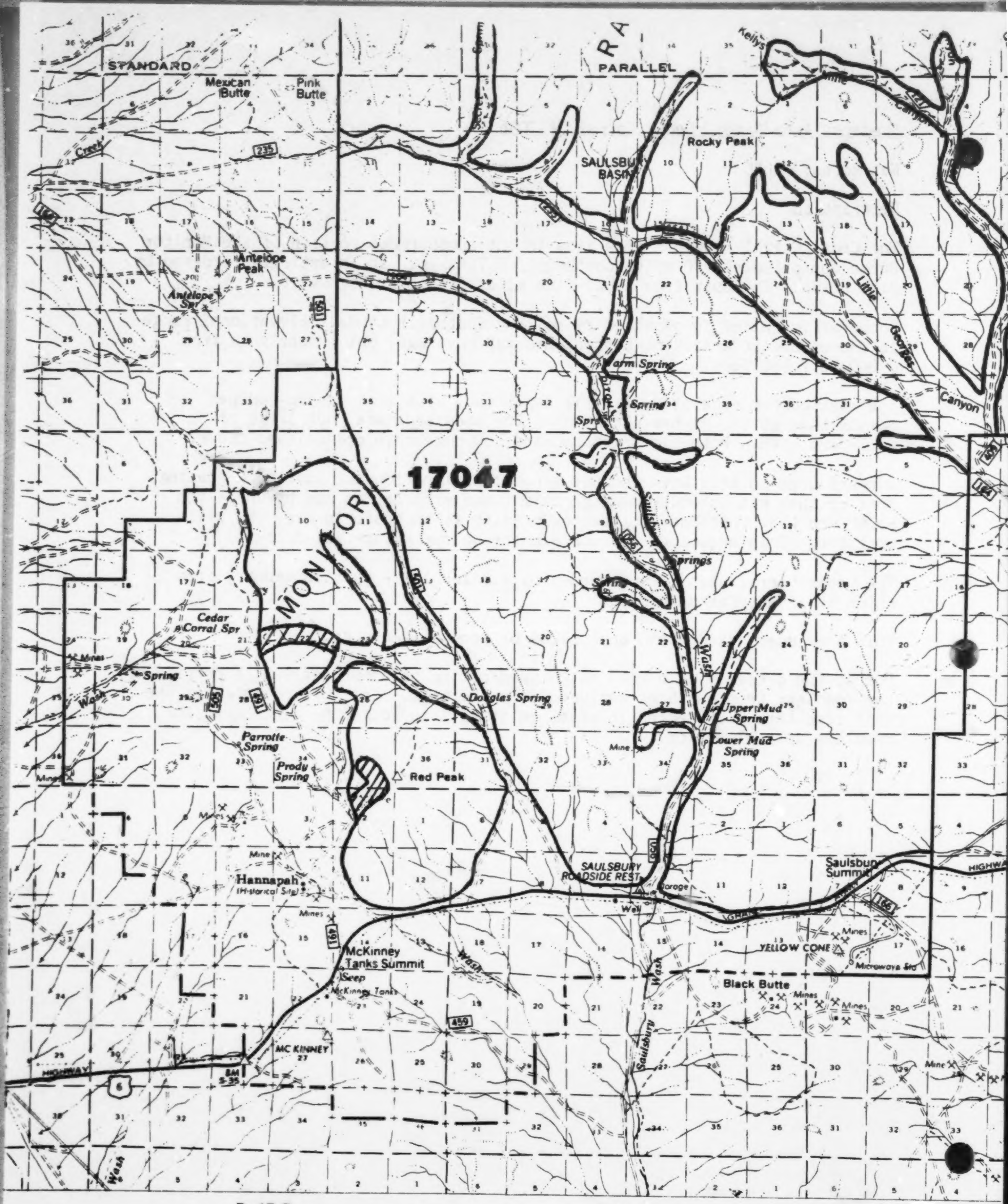
The most common vegetative type is sagebrush, with some pinyon-juniper communities at the higher elevations. The woodlands are not large or well-developed. Both big sagebrush and low sagebrush communities occur.

Current uses in this area include mineral exploration and livestock grazing. Most of the unit is under mining claims, and exploration has begun in the south and west portions. Livestock grazing is an historic use, and will continue. This area does not contain any unique or special features.

The Cedar Corral unit is surrounded by similar low elevation country from which it is separated by roads.

This area does not contain any unique or special features.

Due to the presence of a road not mapped during pervious reviews, a portion of the roadless area has been excluded from the unit. This exclusion makes the unit less than 5,000 acres in size, so it will no longer be considered for roadless area elevation.


17047
STANDARD
PARALLEL
Mexican Butte
Pink Butte
Rocky Peak
SAULSBURY BASIN
Kellys
Little
Canyon
Creek
Antelope Peak
Antelope Spr
Little Georges Canyon
Warm Spring
Spring
MONITOR
Saulsbury
Springs
Cedar Corral Spr
Mines
Spring
Wash
Douglas Spring
Upper Mud Spring
Lower Mud Spring
Mine
Parrotte Spring
Prody Spring
Red Peak
Mines
Mine
Hannapah
(Historical Site)
SAULSBURY ROADSIDE REST
Garage
Well
Saulsbury Summit
HIGHWAY
GRAND
Mines
YELLOW CONE
Microwave Sta
Mines
McKinney Tanks Summit
Seep
McKinney Tanks
Black Butte
Mines
Mines
Saulsbury Wash
MC KINNEY
BM 5335
HIGHWAY
6
235
105
505
169
166
459
R. 45 E.
R. 46 E.
R. 47 E.
117°00'
G
52'30"
H
116°45'

SAULSBURY

Roadless Area Name: Saulsbury, #17047

Net Acres: 20335

Description

The Saulsbury roadless area lies in the southern portion of the Monitor range approximately 25 miles east of Tonopah. The area is accessible by improved dirt roads on three sides, and lies adjacent to U.S. Highway 6 on the south.

This area is characterized by rolling hills, sagebrush basins and rimrock cliffs. Arid Foothill Lands and Arid Alluvial Fan Lands are representative land types. Exact elevation ranges are unknown due to the lack of topographic coverage.

Vegetative types are limited to sagebrush communities and desert scrub communities at the lower elevations. Both big and low sagebrush types are represented. Scattered pinyon pine and juniper trees occur in some areas, but the typical pinyon-juniper woodland is poorly defined.

Current uses in this area include grazing, dispersed recreation, and mineral exploration. Livestock grazing is an historic use which will continue. Dispersed recreation includes upland game hunting, hiking and camping. Recreation use is very light, less than 50 RVD's annually. Mineral exploration has been concentrated along the southeastern boundary and is continuing in that area.

The roadless area is bounded by Ralston Valley on the northwest, and similar low elevation country on the west, south and east. Most of the boundary consists of definable roads.

Capability

Most of this roadless ares is bordered by definable roads. Approximately 1-1/2 miles of northwest boundary consists of National Forest/Bureau of Land Management (BLM) boundary which is not easily recognized, even when marked. Some management problems could occur along this section of boundary, and possibly along the roads on the east side. There are no important topographical features which would better serves as a boundary on the east. Wilderness characteristic will not enhanced by boundary changes. There are no incompatible activities which need to be separated from the present roadless area boundary changes.

The natural integrity of the roadless area remains intact with no man-made facilities. There are many trails throughout the area which have been created through livestock or wild horse use. There are no range improvements.

The area appears to be very natural with little indication of man's presence.

Topographic variation within the unit is not impressive due to the relatively minor slopes and occurrence of wide basins. Topographic screening is best at the bottom of drainages and around rimrock outcrops. Vegetative screening is almost non-existent due to the low-growing nature of the plants and the scarcity of trees. Opportunities for solitude are limited due to these factors.

Types of primitive recreation which occur in this unit include upland game hunting, camping, rock hunting, hiking and horseback riding. Opportuities for these and other activities are limited by the lack of potable water and trails. Riding without trails is not difficult due to the shallow slopes and low-growing vegetation.

This roadless area presents the challenge of hiking or camping in an arid, inhospitable environment. There is little shelter from the elements, and wind and heat are major problems during the summer. The recreationist needs to carry all his own water and be prepared for complete self-sufficiency, especially in the northern portion of the unit, since services and medical aid are far away.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive plant species are known to occur here.

This unit does not contain any special features or unique ecosystems.

Availability

Types of and opportunities for primitive recreation are limited within this roadless area by physical features. Lack of trails, potable water and notable scenery makes this a very low use are with little potential for improvement. The Analysis of the Management Situation for the Toiyabe National Forest indicated that the demand for dispersed recreation will continue to increase. Although this unit could easily accomodate increased use, it is unlikely to occur. No use figures exist for this area, but annual recreational use is believed to be quite low.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative communities, including the sensitive species listed above. Chukar partridge occur in some of the rimrock areas.

This area is within two National Forest watersheds. No systematic survey of watershed condition has been made, although overall condition appears to be fair to good. Surface water quality is impacted by livestock use. Distribution of water source is poor, most free water is found in small isolated seeps and springs.

The Saulsbury roadless area contains portions of two livestock allotments administered by the Forest Service. Cattle graze the northern portion of the unit from January to May, and in the southern portion from November to June. Approximately 75 AUM's are grazed annually by two operators. The area has been grazed by livestock since at least 1870.

This area is contained within the Monitor Wild Horse Territory and is used by horses during the spring and summer. The Tonopah District will maintain horse numbers within this territory in compliance with Forest Service policy. Enthusiasts may often view horses from existing roads.

This roadless area is part of the Intermountain Sagebrush Ecoregion

(3130-021), and contains primarily the Great Basin ecosystem type. Desert scrub communities occur at the lowest elevations, and communities dominated by either low sagebrush or big sagebrush are widespread. Some scattered pinyon pine and juniper trees occur at the highest elevations. Riparian habitat is represented by a very few seeps and springs. Since riparian areas represent only .1% of all the lands in Nevada, maintenance of these areas is a priority and will continue as such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commerical grade timber in this roadless area.

Saulsbury is located between two volcanic calderas and exhibits primarily welded tuffs and rhyolite rock types. There is minor faulting. Moderate mineral potential exists for both disseminated gold and silver. The unit lies within 5 miles of Hannapah, where gold discoveries in the early 1900's led to patenting of some claims.

Although little formal archaeological investigation has been conducted, extensive prehistoric sites are known to exist in this unit. Archaeological sensitivity is expected to be high.

A swath of land 2 miles wide adjacent to Highway 6 may be required for a future utility corridor. Such designation has already been requested by a utility company, and assessment of the area for that use will be made in the Toiyabe Forest Plan.

There is presently no burning plan for this area. No fire protection or development activities are anticipated.

There is one parcel of private land within this roadless area, consisting of 40 acres. There is currently no road access to this parcel.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Saulsbury. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVDs of use.

Little support was generated for designation of this area as a wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Saulsbury roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Saulsbury

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							20.3		20.3
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	20.3								
Market Opportunities (Timber and/or Grazing)		20.3		20.3	20.3			20.3	
Wildhorses/Wildlife & Dispersed Rec.			20.3			20.3			
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Saulsbury*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	1	1	1	1	1	0	1	0
Livestock Grazing	AUM	200	327	158	327	327	327	183	327	183
Dispersed Recreation	MRVD	1.6	1.1	1.6	1.1	1.1	1.2	1.6	1.1	1.6
Wildlife	MWFUD	.1	.1	.3	.1	.1	.1	.3	.1	.3
Wildlife Habitat Improvement	Acres	0	0	1	0	0	0	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

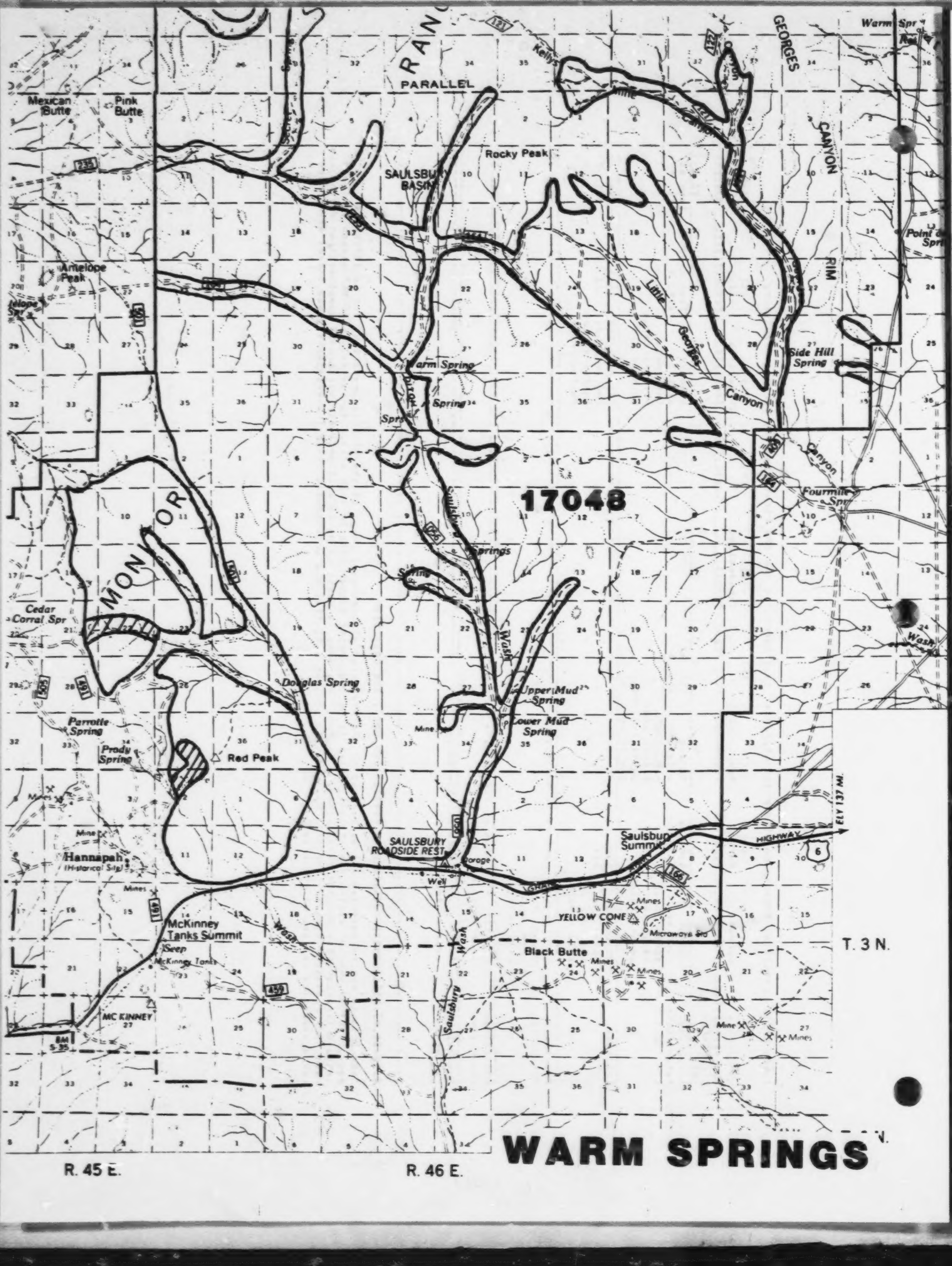
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Saulsbury

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	20.3	0	20.3
Integrity/ Naturalness (Int./Nat.)	Mining & wood products Int./ Nat. will be mod./high	Same as Alt. A	Mining wildlife hab. impr. & wood products Int./Nat. mod./high	Same as Alt. A	------>	------>	Reduced mining Int./Nat. will increase to high	Same as Alt. A	Same as Alt. F
Solitude	No change oppor. for solitude will remain low	Same as Alt. A	------>	------>	------>	------>	ORV redtriction solitude increases to low/moderate	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A	------>	------>	------>	------>	------>	------>	------>
Challenging Experience	Limited opportunities	Same as Alternative A	------>	------>	------>	------>	------>	------>	------>
Special Features	Not represented	Same as Alternative A	------>	------>	------>	------>	------>	------>	------>

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 10 MCF pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



WARM SPRINGS

Roadless Area Name: Warm Springs, #17048

Net Acres: 28275

Description

The Warm Springs roadless area is located in the southern portion of Monitor Range approximately 30 miles east of Tonopah. The area is accessible by improved dirt roads on two sides, and lies adjacent to U.S. Highway 6.

This area is distinguihed by wide rolling basins and wooded hills, with low hills along the eastern boundary. Land Types include the Alluvial Arid Fan and Arid Foothill Lands. Elevations range from 6,100 feet in Stone Cabin Valley to 7,400 on the interior hills.

The lower elevations are dominated by sagebrush communities and some desert scrub types, pinyon-juniper woodlands occur at the highest elevation.

Current uses in this area include grazing, dispersed recreation, and mineral exploration. Livestock grazing is an historic use which will be continued. Dispersed recreation includes hunting, fishing, hiking, camping and many other primitive activities. Mineral exploration has occurred in adjacent areas and prospecting within this roadless unit continues.

Stone Cabin Valley lies on the east side of the unit. Rolling hills lie along the northern and western boundaries, and U.S. Highway 6 forms the southern boundary.

There are no special features in this roadless unit.

Capability

The Warm Springs roadless area is bounded on the north, west and south by definable roads. The east boundary consists of National Forest/Bureau of Land Management (BLM) boundary which is not easily recognized, even when marked. Some management problems might occur along the unfenced NF/BLM boundary and roads; however, there are no important topographical features which could better serve as a boundary. Wilderness characteristics will not be enhanced by boundary changes. There are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of the roadless area remains essentially intact with few man-made facilities. Some range improvements including fences and water developments occur in the area, and some trails linking roads exist as well. These trails are used primarily by livestock and wild horses.

The area has not been significantly impacted by man's activities, and appears to be very natural and unspoiled.

Due to low hills and shallow washes, topographic screening is not significant. Vegetation is generally low growing, except on the few hills high enough to support pinyon pine of juniper trees. Elevations are not high enough to provide a feeling of isolation through height alone. Overall, opportunities for solitude are not good in this unit, and are very low when compared with areas such as Table Mountain.

Opportuinties for primitive recreation include camping, backpacking, hiking, horseback riding, upland gamebird hunting, picnicking, and rock hunting. The quality of the pursuit is adversely affected by the lack of trails, potable water and significant scenery.

This roadless area provides the recreationist with the challenge of hiking or camping in a remote area with little usable surface water. The recreationist must come prepared for complete self-sufficiency, because medical help and services are many miles away.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines in the Tonopah Ranger District Sensitive Wildlife Species Plan. No sensitive, threatened or endangered plant species are known to occur here.

Availability

Many types of primitive recreation are available in the Warm Springs area. Hunting for upland game birds is probably the most popular, but other activities include hiking, horseback riding, camping, backpacking, rock hunting, picnicking, photography and sightseeing.

The Analysis of the Management Situation for the Toiyabe National Forest indiciated that demand for dispersed recreation will continue to increase. There are no figures showing current recreational use of this area; however, total annual use is believed to be quite low, less than 50 RVD's a year.

This area supports those wildlife species tied to the pinyon-juniper and sagebrush vegetative communities, including the sensitive species listed earlier.

This area is within two National Forest watersheds. No systematic survey of watershed conditions has been made. Overall condition appears to be good, probably due to the small amount of surface water. Surface water quality is impacted by livestock use. Distribution of water sources is poor, most free water is along the roads of the western boundary, although a few seeps occur in the interior.

Warm Springs includes portions of two livestock allotments administered by the Forest Service. Cattle graze the area from July to September in the northern portion, and from November to June in the southern portion. Approximately 50 AUM's are grazed annually by two operators. The area has been grazed by livestock since at least 1870. Some minor range improvements exist in the area.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021) and contains primarily the Great Basin Sagebrush ecosystem type. Some desert scrub communities occur at the lower elevations, and pinyon-juniper occur at the highest elevations. Riparian habitat is represented by a few seeps. Since riparian areas represent only .1% of all the lands in Nevada, maintenance of these areas is a priority and will continue to be such.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area.

This area is primarily of volcanic orgin and rocks consits of tuffs and rhyolites. Mineral exploration has been concentrated along the southeastern boundary and so far has not revealed any significant mineralization. Potential for mineral development is moderate for disseminated gold and silver.

It is possible that a two mile wide stretch of land along U.S. Highway 6 will be required for a utility corridor. A request for such a designation has already been made. Effects of such a designation will be analyzed in the Forest Plan.

There is presently no burning plan for this area. No fire protection or development activities are anticipated.

There are no known insect or disease problems. No control projects are anticipated.

Archaeological sensitivity is expected to be moderate to high.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Warm Springs. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are Reno/Carson City area, about 250 miles to the northwest and the Las Vegas area, about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness has 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Warm Spring roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Warm Springs

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							28.3		28.3
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	28.3								
Market Opportunities (Timber and/or Grazing)		28.3		28.3	28.3			28.3	
Wildhorses/Wildlife & Dispersed Rec.			28.3			28.3			
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Warm Springs*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	1	2	1	2	2	1	0	2	0
Livestock Grazing	AUM	420	704	323	704	704	420	384	704	384
Dispersed Recreation	MRVD	2.3	1.5	2.3	1.5	1.5	2.3	2.3	1.5	2.3
Wildlife	MWFUD	.1	.1	.4	.1	.1	.1	.4	.1	.4
Wildlife Habitat Improvement	Acres	14	0	16	0	0	14	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

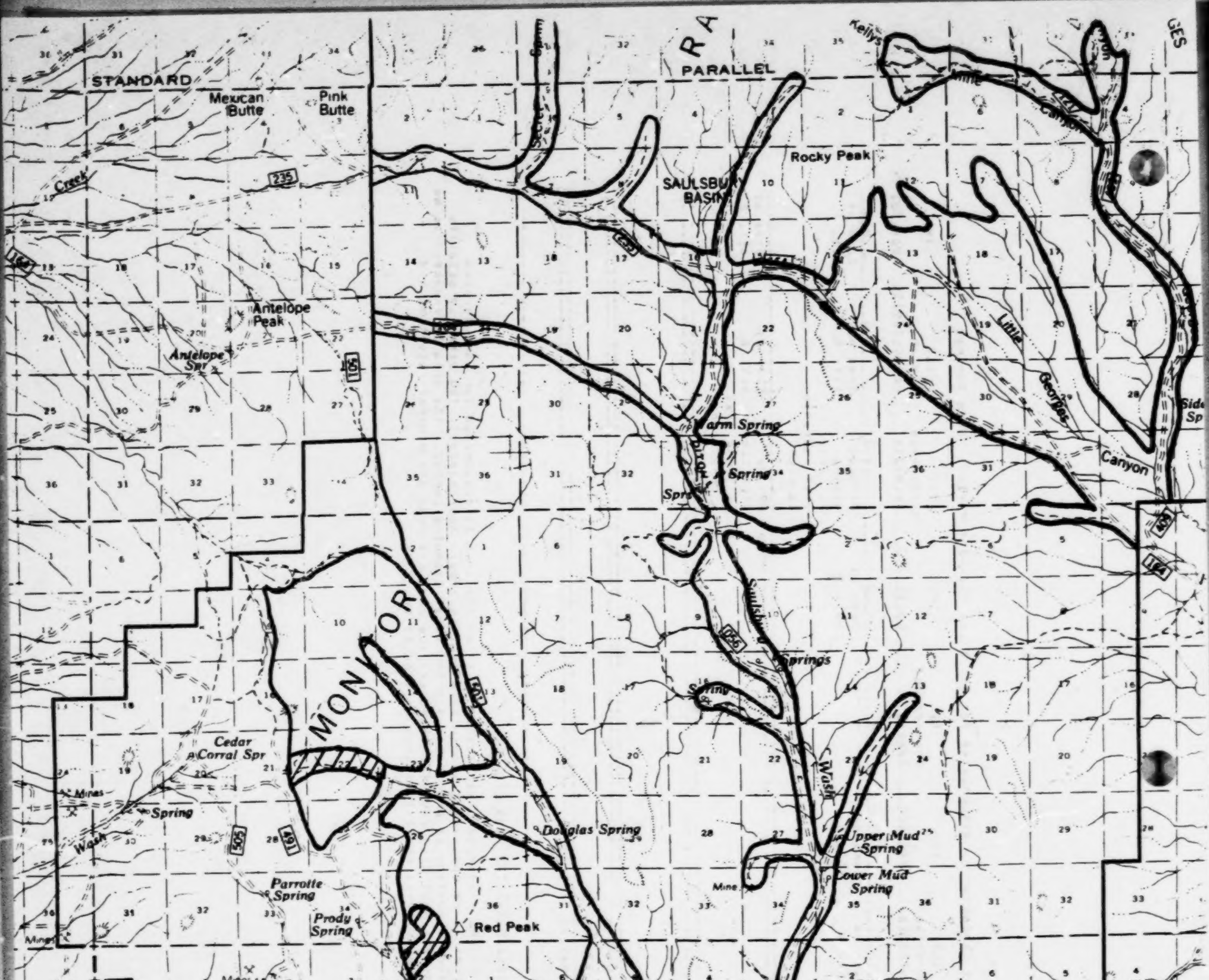
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Warm Springs

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(F) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max. PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	28.3	0	28.3
Integrity/ Naturalness (Int./Nat.)	Mining, wildlife hab. impr. & wood products Int./ Nat. mod./high	Mining & wood products Int./ Nat remains mod/high	Same as Alt. A	Same as Alt. B	------------>	Same as Alt. A	Reduced mining Int./Nat. will increase to high	Same as Alt. B	Same as Alt. F
Solitude	No change oppor. for solitude will remain low	Same as Alt. A	------------	------------	------------	------------>	ORV restriction. Solitude will increase to moderate	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A	------------	------------	------------	------------	------------	------------	------------>
Challenging Experience	Limited opportunities	Same as Alternative A	------------	------------	------------	------------	------------	------------	------------>
Special Features	Not represented	Same as Alternative A	------------	------------	------------	------------	------------	------------	------------>

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. Approximately 140 acres of wildlife habitat improvement and 10 MCF of pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.


STANDARD
PARALLEL
RA
GES
Mexican Butte
Pink Butte
Creek
235
Antelope Peak
Antelope Spr
150
Rocky Peak
SAULSBURY BASIN
Kellys
Little Canyon
Little Georges Canyon
Warm Spring
Spring
Sprs
Saulsbury Wash
Springs
Spring
MONITOR
Cedar Corral Spr
Mines
Spring
Wash
505
Douglas Spring
Upper Mud Spring
Lower Mud Spring
Mine
Parrotte Spring
Prody Spring
Red Peak
17049
Mines
Mine
Hannapah (Historical Site)
SAULSBURY ROADSIDE REST
Well
Garage
Saulsbury Summit
HIGHWAY
166
Mines
YELLOW CONE
Microwave Sta
Black Butte
Mines
Mines
Mine
McKinney Tanks Summit
Seep
McKinney Tanks
MC KINNEY
459
BM 5435
HIGHWAY
6
Wash
Saulsbury Wash
R. 45 E.
R. 46 E
47 E.
7°00'
52'30"
116°45'

RED PEAK

Roadless Area Name: Red Peak, #17049

Net Acres: 5090

Description

The Red Peak roadless area is a small unit located in the southern Monitor Range approximately 20 miles east of Tonopah. The area is accessible by dirt roads from all sides, and lies adjacent to U.S. Highway 6.

This area consists of rolling foothills and alluvial fans which are dissected by numerous shallow dry washes. Land forms include Arid Foothill Lands and Arid Alluvial Fan Lands. Elevations are in the 6,500 foot to 8,000 foot range. No topographic coverage exists for this area, so exact elevations are unknown.

Sagebrush communities dominate the unit. Scattered pinyon-pine and juniper trees occasionally make up a woodland type.

Current uses in this area include livestock grazing, dispersed recreation, and mineral exploration. Livestock grazing is an historic use which will continue. Dispersed recreation includes hunting and sightseeing of historic artifacts. Mineral exploration has recently become more common, and includes road construction and exploratory drilling. Such activity has occurred along the borders of the unit, and will likely be proposed for lands within this unit in the future.

The roadless area is surrounded by similar lands, separated only by roads.

Historic resources are the only special feature of this area.

Capability

The Red Peak roadless area is bordered entirely by improved dirt roads. These roads are maintained sporadically by mining interests. Management problems could occur along the single road; however, there are no important topographical features which could better serve as a boundary. There are no incompatible activities which need to be separated from the present roadless area by boundary changes.

The natural integrity of the area remains intact with very few man-made intrusions. Some old mining scars exist, but their impact is localized and relatively unnoticeable. The area appears very natural with little indication of man's activities.

Due to the numerous washes, topographic variation is good in some areas. Vegetative screening is limited to pinyon-juniper sites, where it is fair. Overall, opportunities for solitude are fair, and highly dependent on topography.

Opportunities for primitive recreation center on mineral resources, with rock hunting the most important. Some upland game bird hunting occurs, but it is not a major use of the area. The unit is not used heavily for recreation of any kind.

Little challenge exists for a recreationist in this area due to its small size, relatively gentle terrain and proximity to a major travel route. A hiker could easily traverse the unit in a day, and is always close to civilization (and medical help and other services). This area presents no real recreational challenge.

Sensitive wildlife species which occur in this area include the golden eagle, prairie falcon, ferruginous hawk, and great horned owl. These species have been listed as sensitive and will continue to be managed according to the guidelines listed in the Tonopah Ranger District Sensitive Wilderness Species Plan developed in cooperation with the Nevada Department of Wildlife. No sensitive plants are known to occur here.

Availability

Few types of primitive recreation are available in this unit. Quality of recreational experience is limited by the unit's size, lack of water and lack of special features. The Analysis of the Management Situation for the Toiyabe National Forest indicates that demand for dispersed recreation will continue to increase. This area could easily sustain a higher level of recreational use; however, additional use is unlikely to occur.

This area supports those wildlife species tied to the sagebrush and pinyon-juniper vegetative communities, including the sensitive species listed earlier. Some pronghorn antelope use this are on a seasonal basis, but due to the low number of pronghorn in the Monitor area, amount of use is minimal.

This unit is contained within a single National Forest watershed. No systematic survey of watershed condition has been made, but overall condition appears to be good. Surface water quality is impacted by livestock. Water sources are limited to a very few intermittent seeps.

Red Peak is contained within a single National Forest livestock allotment. Cattle graze approximately 50 AUM's annually from November through June for one operator. The area has been grazed by livestock since at least 1870.

This roadless area is part of the Intermountain Sagebrush Ecoregion (3130-021) and contains the Great Basin sagebrush ecosystem. Some pinyon-juniper ecosystem types occur at the higher elevations. Riparian habitat is essentially non-existent.

All of central Nevada is included within a Class II air basin, indicating that industrial development in the surrounding region is somewhat restricted.

There is no commercial grade timber in this roadless area. No cordwood sales or cutting units are proposed.

This area is of volcanic origin and lies adjacent to the Hannapah caldera. Rock types are welded tuffs and rhyolites. Mining activity occurred at Hannapah early in this century, and patented claims attest to the occurrence of gold and silver in vein deposits. Mineral potential is moderate for gold.

Cultural resources in this area include historic sites related to the early mineral exploration period around 1900. Prehistoric resources consist of scattered sites and archaeological sensitivity is expected to be moderate.

It is possible that a strip of land 2-3 miles wide along Highway 6 will be needed for a utility corridor in the future. A utility company has already proposed such designation. Effects of a utility corridor will be analyzed in the Forest Plan.

There is no known insect or disease problems. No control projects are anticipated.

There are no privately-owned lands contained within this roadless area.

Need

Nevada has one existing wilderness, the Jarbidge Wilderness, 250 miles northeast of Red Peak. Closer wilderness areas exist in the Sierra Nevada range of California (Hoover Wilderness), and in Utah, 150 to 250 miles away. These areas provide the closest opportunities for a wilderness visit for Nevada residents. The nearest population centers in Nevada are the Reno/Carson City area, about 250 miles to the northwest, and the Las Vegas area about 250 miles to the south. Use in the Jarbidge Wilderness averages 13,000 RVD's per year and the Hoover Wilderness had 72,000 RVD's of use.

Little support was generated for designation of this area as wilderness during the RARE I and central Nevada land use planning effort. The area was not reevaluated during RARE II.

The primary ecosystem type represented in the Red Peak roadless area is common throughout Nevada. This area is probably not needed to represent specific ecosystem types within the wilderness system.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Red Peak

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness							5.1		5.1
Minimum Level (Custodial)					5.1				
Intensive Wildlife & Dispersed Rec.									
Stewardship Wildlife, Range & Dispersed Rec.	5.1								
Market Opportunities (Timber and/or Grazing)				5.1				5.1	
Wildhorses/Wildlife & Dispersed Rec.		5.1	5.1			5.1			
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Red Peak*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	0	0	0	0	0	0	0	0	0
Livestock Grazing	AUM	49	27	27	49	33	27	33	49	33
Dispersed Recreation	MRVD	.4	.4	.4	.3	.3	.4	.4	.3	.4
Wildlife	MWFUD	0	.1	.1	0	0	.1	.1	0	.1
Wildlife Habitat Improvement	Acres	0	0	0	0	0	0	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

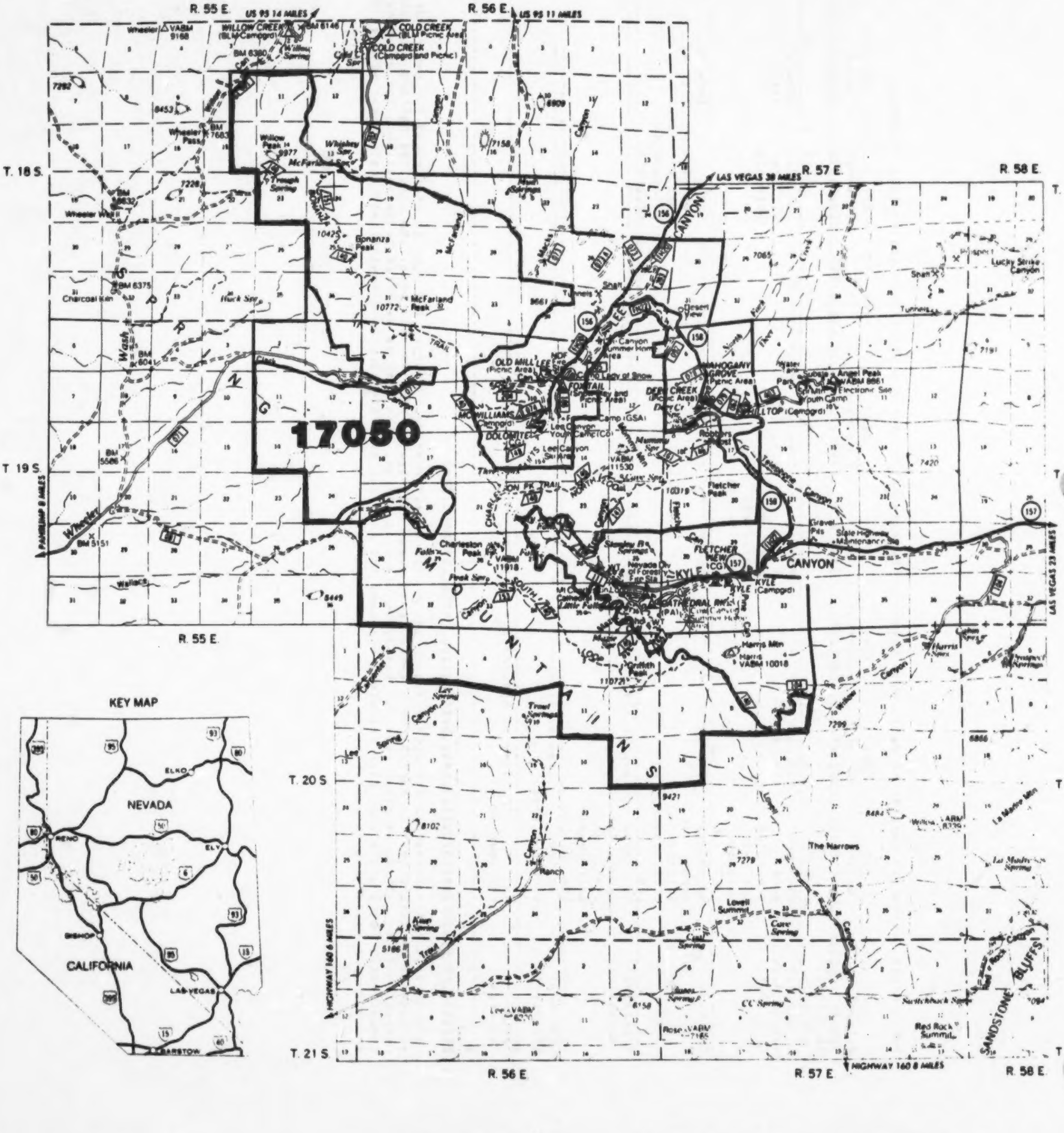
* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Red Peak

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	0	0	0	0	5.1	0	5.1
Integrity/ Naturalness (Int./Nat.)	Wood products scheduled Int/Nat. remains high	Same as Alt. A	------------->	Mining & wood products Int./Nat. remains high	Same as Alt. A	----------------->	Int./Nat. will remain high	Same as Alt. D	Same as Alt. F
Solitude	No change oppor. for solitude will remain low	Same as Alt. A	----------	----------	----------	---------->	ORV restriction will increase solitude to moderate	Same as Alt. A	Same as Alt. F
Primitive Recreation	No change Oppor. for prim. rec. will remain low	Same as Alternative A	----------	----------	----------	----------	----------	----------	---------->
Challenging Experience	Limited opportunities	Same as Alternative A	----------	----------	----------	----------	----------	----------	---------->
Special Features	Not represented	Same as Alternative A	----------	----------	----------	----------	----------	----------	---------->

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is not recommended for wilderness in the preferred alternative. Most of the area is prescribed for nonintensive management or semi-primitive recreation. There is no commercial timber base in this area. No wildlife habitat improvement or pinyon fuelwood cutting is prescribed for the first planning period. The area is expected to be available for wilderness consideration during the next plan revision, however, the area has moderate mineral potential and unscheduled mineral development could impact wilderness characteristics on some of the area.



MOUNT CHARLESTON

Roadless Area Name: Mount Charleston, #17050

Net Acres: 38370

Description

The Mt. Charleston roadless area on the Las Vegas Ranger District accounts for over 65 percent of the District public lands. The area lies about 35 miles northwest of the city of Las Vegas and is accessible by State Highways 156, 157, and 158 and several low grade dirt roads which surround it.

The area consists of many varied land forms including rocky ridge land, cliffs and dissected slope lands. Slope gradients usually exceed 40 percent. Soils are generally highly erodable following disturbance.

High elevations have harsh climate with summer temperatures rerely exceeding 65 degrees. Wind action is continual, predominantly from the west. Annual precipitation ranges fron 25 to 28 inches with snow depths of 4 to 6 feet. Most avalanches and floods originate in this area.

Vegetation ranges from a lower elevation, pinyon-juniper community to high elevation, pseudo-alpine zone. Some of the more common plant species associated with the area are: pinyon pine, Utah juniper, big sagebrush, gambel oak, blackbrush, mountain mahogany, white fir, ponderosa pine, aspen, limber pine, bristlecone pine and several species of grass.

Ecosystem types, according to Bailey and Kuchler, identified for the area consist of: American Desert Province - Juniper/Pinyon Woodland (3220-21) and American Desert Province - Western Ponderosa Forest (3220-10). The elevation relief (7,500 to 11,000) and physiographic isolation have created an "island in the desert" within these broadly mapped provinces, comprised of pinyon-juniper, ponderosa pine-white fir, bristlecone pine and pseudo-alpine ecosystems.

Hiking and backpacking are the primary uses of the area. Ridgeline trails presently extend through most of the area, including the Mt. Charleston National Recreation Trail. It is a very scenic route offering spectacular views into Pahrump Valley, Las Vegas Valley and the Panamint Range in Death Valley National Monument. Use of the roadless area is moderate, approximately 15,000 RVD's per year.

The area contains 18,000 acres of bristlecone pine, the most extensive stand of these ancient trees in the Intermountain Region. This tree is highly valued for aesthetic and scientific purpose and is among the oldest living organisms in the world.

Capability

With the exception of steep cliff lands around Lee and Kyle Canyons the area does not align itself with any strong topographic features for a good manageable boundary.

Bureau of Land Management's La Madre Mountains Wilderness Study Area (# NV-050-0412) ajoins the Mt. Charleston roadless area near Griffith and Harris Peaks. Interagency coordination has been complete to achieve a logical evaluation, unencumbered by agency administrative boundaries.

The natural integrity and appearance of the area is high. There are several helispot clearings; however, their impact is low and the area maintains a presence of near-natural conditions. Opportunities for solitude and primitive recreation are high. This is due to the area's use, good topographic screening, and primitive trail system.

A relatively low-profile, solar powered Forest Service radio repeater on Charleston Peak is presently essential for protection and management. Since 1976, plans have existed for its removal when technology and economics allow a feasible alternative.

Activities of hiking, primitive camping, horseback riding, hunting and rock climbing provide excellent opportunities for challenging experiences.

There are no formally listed threatened, endangered or sensitive plant species, however 27 plant species are endemic to the area. In 1973, 2,250 acres in the upper Carpenter Canyon drainage were designated as a research natural area for purposes of scientific study. The research area is not withdrawn from mineral entry.

Availability

Recreation use of the area is moderate, generally limited to backpacking, camping, horseback riding, hunting and rock climbing. It has been proposed to connect the existing trails along the crest of the Spring Mountain Range. This interagency trail system would extend from near Mt. Sterling across the National Forest, and into the Red Peak Recreation Land (BLM). This would also provide an excellent opportunity to increase the existing nine miles of National Recreation Trail.

The area has a diverse population of wildlife. Some of the most common species being: several bat species, Panamint chipmunk, pinyon mouse, desert pack rat, rock squirrel, golden mantled ground squirrel, deer mouse; Palmer s chipmunk (endemic), southern pocket gopher, porcupine and deer. Introduced elk and native desert bighorn sheep occur occasionally.

Grazing has been light and limited to wildlife, occasional tresspass livestock, and recreation stock. Areas suited for grazing are limited to a few scattered and easily eroded grassy openings. No cattle, horse or sheep grazing permits are issued in the roadless area.

There has been a history of timber harvest in the area. Early day harvest was done on a highly selective basis, removing the high-grade trees to meet agricultural, railroad and mining needs. Recent commercial cutting has been limited to trees, dead or dying as a result of insect attack, fire or avalanches. Firewood has been the primary product of the few small sales in recent years. There are no commercial sawmills in Las Vegas or within a reasonable travel distance

The area consists totally of folded and faluted limestone and sandstone sediments. Alluviated slopes and canyon bottoms consist of permeable gravels.

There is negligible known locatable mineral potential in this area and exploration is not anticipated. Although the potential for oil and gas discoveries is considered less that 5% (USGS), much of the area has been leased. There has been limited exploration (gravity surveys), the results of which are unknown.

Several cultural resource sites have been inventoried in the area. Identified pre-historic sites consist of rock shelters, roasting pits, and chipping sites along with open lithic scatter. More recent historic sites include several sawmills and cabin sites.

Geologic configuration results in very little surface water flow, with the notable exceptions of Deer Creek and Carpenter Creek. Large amounts of subsurface water eventually flow to the Las Vegas and Pahrump Valley acquifers, significant domestic resources. Where bedrock is exposed springs occur, which, with their associated riparian vegetation, are highly important for wildlife and dispersed recreation.

Increased recreation use has resulted in an increase of human-caused fires. Lightning fires are common, usually involving isloated trees on high ridge lines. At higher elevations, ground fuel is generally absent and fire spread is limited because trees are usually very scattered. Permitting "safe" fires to burn out naturally in some areas may be important to insure continued survival of endemic plants that naturally revegetate burned areas, and also to cut down on excessive suppression costs due to remoteness.

There are approximately 2,060 acres of private land within the roadless area. Private land adjacent to the roadless area in Clark Canyon blocks public access. Also, there could be potential problems with future development on private lands in the vicinity of Mummy Mountain.

Need

The nearest wilderness to the Mt. Charleston roadless area is the John Muir, about 150 miles due west, and the closest population center is Las Vegas about 35 miles southeast, with 1/2 million people in the metropolitan area.

This roadless area was not considered for wilderness during the RARE II process because the area was evaluated in unit planning. The Sierra Club has expressed interest in the Mt. Charleston roadless area as wilderness. Expressions by the local public, congressional, and the University of Nevada Las Vegas have been mixed with no strong voice for or against wilderness.

The ecosystem representation is unique in that it contains an extensive stand of bristlecone pine, 27 endemic plant species, the endemic Palmer's chipmunk and the threatened spotted bat.

Effects of Wilderness/Nonwilderness Prescriptions

Table C-1 Management Prescriptions Assigned to Roadless Area, by Alternative, by M Acres: Mount Charleston

Management Prescription	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H
Wilderness			38.4	38.4	38.4	32.0	38.4	38.4	38.4
Minimum Level (Custodial)									
Intensive Wildlife & Dispersed Rec.		38.4				6.4			
Stewardship Wildlife, Range & Dispersed Rec.	38.4								
Market Opportunities (Timber and/or Grazing)									
Wildhorses/Wildlife & Dispersed Rec.									
Further Planning									

Table C-II Environmental Consequences of Wilderness/Nonwilderness Designation on the Environment for the First Planning Period: Mount Charleston*

Management Description		A	B	C	D	E	P	F	G	H
Sawtimber	MBF	0	0	0	0	0	0	0	0	0
Fuelwood	MCF	6	6	0	0	0	0	0	0	0
Livestock Grazing	AUM	0	0	0	0	0	0	0	0	0
Dispersed Recreation	MRVD	161.7	323.4	323.4	323.4	323.4	323.4	323.4	323.4	323.4
Wildlife	MWFUD	.1	.1	.1	.1	.1	.1	.1	.1	.1
Wildlife Habitat Improvement	Acres	302	564	0	0	0	0	0	0	0
Fuel Management	Acres	0	0	0	0	0	0	0	0	0
Mineral Potential	H/M/L	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.

* All values are (average annual) for the period shown except for sawtimber (where applicable) which is the average annual volume for the two hundred year planning period.

Table C-III Estimated Impacts on Wilderness Character by Alternative for the First Planning Period: Mount Charleston

Wilderness Characteristics	(A) Current Direction	(B) Market Emphasis	(C) Nonmarket Emphasis	(D) 1980 RPA	(E) Constrained Budget	(P) Local ICO	(F) Wilderness Emphasis	(G) High Productivity	(H) Max.PNV
WILDERNESS M/ACRE	0	0	38.6	38.6	38.6	32.0	38.6	38.6	38.6
Integrity/ Naturalness (Int./Nat.)	Mining wildlife hab. impr. & wood prod. Int./Nat. moderate	Same as Alt. A	Reduced mining Int./Nat. will increase to high	Same as Alternative C ---->					
Solitude	No change oppor. for solitude will remain high	Same as Alt. A	---->						
Primitive Recreation	No change Oppor. for prim. rec. will remain high	Same as Alt. A	---->						
Challenging Experience	Rugged terrian, high opportunity	Same as Alt. A	---->						
Special Features	Bristlecone pine; contains RNA	Same as Alt. A							

Effects of Wilderness/Nonwilderness Designation Until the Next Plan

This area is recommended for wilderness designation in the preferred alternative with a boundary modification. The 5300 acre area in the vicinity of Mummy Mountain which is nearly 30 percent privately owned is designated as non-wilderness.

Wilderness designation of 32,000 acres will inhance the protection of ancient stands of bristlecone pine and a unique population of 27 endemic plants, and provide a wilderness experience to southern Nevada residents. Wilderness designation will have a minimal effect on fuelwood harvest and wildlife habitat improvement projects. There are no timber sales, active mining operations, or livestock use within the proposed wilderness.

The impacts on the social and economic conditions of the local communities, counties and the State are insignificant if the recommended portion of this roadless area is designated wilderness.

Of the area not recommended for wilderness in the preferred alternative it is expected that it will be available for wilderness consideration during the next plan revision; however, the area has moderate oil and gas potential and unscheduled mineral development could impact wilderness characteristics.

APPENDIX D

MANAGEMENT AREAS

1. Dog Valley
2. Carson Front
3. Alpine
4. Walker
5. Wilderness
6. Pinyon-Juniper
7. Paradise-Shoshone
8. Toiyabe Range
9. Toquima Range
10. Monitor Range
11. Mt. Charleston Concentrated Recreation Area
12. Mt. Charleston Dispersed Recreation Area

MANAGEMENT INTENT FOR MANAGEMENT AREA #1

- Emphasize Timber/Range at a moderate level of management on 25,000 acres.

MANAGEMENT INTENT FOR MANAGEMENT AREA #2

- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 90,200 acres.

MANAGEMENT INTENT FOR MANAGEMENT AREA #3

- Manage the Noble Canyon area (4,900 acres) as a recommended addition to the Carson Iceberg Wilderness, pursuant to objectives and intent of the Wilderness Act.

- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 32,400 acres.

- Emphasize market opportunities on 77,300 acres through Developed Recreation, Range and Timber management with primary emphasis on Recreation.

MANAGEMENT INTENT FOR MANAGEMENT AREA #4

- Manage the West Walker area (49,200 acres) as a recommended addition to the Hoover Wilderness, pursuant to objectives and intent of the Wilderness Act.

- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 118,800 acres.

- Emphasize market opportunities on 84,900 acres through Developed Recreation, Range and Timber management with primary emphasis on Recreation.

MANAGEMENT INTENT FOR MANAGEMENT AREA #5

- Manage the Mokelumne, Carson Iceberg and Hoover Wildernesses pursuant to objectives and intent of the Wilderness Act.

MANAGEMENT INTENT FOR MANAGEMENT AREA #6

- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 405,200 acres.
- Emphasize market opportunities on 14,000 acres through Timber and Range management.
- Emphasize Wildhorses, Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 186,000 acres.

MANAGEMENT INTENT FOR MANAGEMENT AREA #7

- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 180,800 acres.
- Emphasize stewardship Wildlife, Range and Recreation at a maintenance program level close to current level of management on 87,000 acres.

MANAGEMENT INTENT FOR MANAGEMENT AREA #8

- Manage the Arc Dome area (94,400 acres) as a recommended wilderness pursuant to objectives and intent of the Wilderness Act.
- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 441,500 acres.
- Emphasize market opportunities on 5,100 acres through Timber and Range management.

MANAGEMENT INTENT FOR MANAGEMENT AREA #9

- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 408,100 acres.
- Emphasize stewardship Wildlife, Range and Recreation at a maintenance program level close to current level of management on 27,300 acres.

MANAGEMENT INTENT FOR MANAGEMENT AREA #10

- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 496,900 acres.

- Emphasize market opportunities on 54,000 acres through Timber and Range management.

- Emphasize Wildhorses, Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 177,600 acres.

MANAGEMENT INTENT FOR MANAGEMENT AREA #11

- Emphasize stewardship Wildlife, Range and Recreation at a maintenance program level close to current level of management on 13,500 acres.

MANAGEMENT INTENT FOR MANAGEMENT AREA #12

- Manage 32,000 acres on Mount Charleston as a recommended Wilderness pursuant to objectives and intent of the Wilderness Act.

- Emphasize Wildlife and Dispersed Recreation amenity values at a high level of management intensity on 12,500 acres.

APPENDIX E

INTRODUCTION

The Toiyabe National Forest is not considered a significant timber forest, however, a departure analysis was performed for the preferred alternative (Alternative P) in an attempt to improve the age class distribution. Region four required a departure analysis on only the preferred alternative for insignificant timber forests.

The Alternative P Departure run had the same constraints as the Alternative P with the exception of the timber constraints. The non-declining yield constraint was removed, the first period cut was increased to 35% above 4.5 MMBF, and a flow constraint was set for the remaining decade to not allow timber harvesting to decrease 25% or increase 35% of timber harvested the previous period. The objective of this alternative was to analyze the effect on the age class distribution.

CRITERIA

CRITERIA I

High Mortality losses from any cause can be significantly reduced or prevented.

Analysis: The departure Alternative P and the non-departure Alternative P were analyzed based on FORPLAN results and professional judgment to determine the mortality loss.

Results: No expected high mortality loss could be reduced or prevented through a departure application. Higher mortality loss would occur in the departure Alternative P because more acres contained higher age classes.

CRITERIA II

Forest age or size class distribution can be improved, thereby facilitating the attainment of the Forest growing at its long-term sustained yield capacity.

Analysis: Table E-1 shows the age class distribution of the both the departure Alternative P and the non-departure Alternative P.

TABLE E-1 AGE CLASS DISTRIBUTION

Alternative	Periods	10	20	30	40	50	60	70	80	90	100
P	END 1st		4125				4167	16870			
	END 5th		780	842	906	2173	2138	2745	4125		
	20 th		2359	3210	2041	2772	446	8355		1483	483
Departure	END 1st		3294				3941	9790			
Run	END 5th		1232	999	349	992	3143	2227	3286		
P	20 th		1259	1834		2227				3297	

AGE CLASS CONTINUED

Alternative	Periods	110	120	130	140	150	160	170	180	190	200+
P	END 1st			11313			14584		18924		
	END 5th		4167	16870						9436	26449
	20 th	3721	783	842	906	1034			1361		40937
Departure	END 1st			7599			12423		26690		
Run	END 5th		3941	9790						5969	31811
P	20 th		1232	999	349	992			3286		48204

Results: Better timber age class distribution is achieved through the non-departure Alternative P than through the departure Alternative P. Further analysis shows any type of a departure allowed will not improve age class distribution. To improve the age class distribution on the Toiyabe National Forest, stands would have to be harvested before Culmination of Mean Annual Increment (CMAI).

CRITERIA III

Implementation of the corresponding Base Sale Schedule (BSS) would cause a sustantial adverse impact upon a community in the economic area in which the Forest is located.

Analysis: Lower limit constraints were used in both alternatives to achieve a given level of timber harvesting in the first period. The non-departure Alternative P had a non-declining yield constraint. The departure Alternative P allowed timber harvesting to increase or decrease a given percent the following periods.

Results: There is only one mill dependent on the Toiyabe National Forest, and a departure now could cause an economic effect in the future due to the declining flow of timber harvested.

CRITERIA IV

None of the alternatives considered provided a Base Sale Schedule that achieves the goals of the RPA program.

Analysis: Both Alternative P's were compared with the RPA alternative.

Results: The non-departure Alternative P supplies half of what is required by RPA for the Base Sale Schedule. The departure Alternative P produces the RPA target in the first period, but then declines. However, other alternatives were considered in detail with one meeting RPA's Base Sale Schedule, and the other one exceeding it.

CRITERIA V

It is reasonable to expect that overall multiple-use objectives would otherwise be better attained.

Analysis: Both Alternative P's were compared with the goals of the RPA alternatiave (the national preferred alternative and a good representative of attainment of overall multiple-use objectives). These alternatives were also compared to issues and concerns.

Results: The non-departure Alternative P and the departure Alternative P met more of the issues and concerns than the RPA alternative. Neither of these alternatives achieved all the RPA goals. Also, performing a departure on Alternative P did not significantly facilitate meeting RPA goals.

CRITERIA VI

Departure opportunities are also analyzed as a means to attain 90% of the annual growth rate at the LTSYC by the year 2030.

Analysis: See Rudy J. Verschoor's paper on Evaluating the 90% of LTSY Growth Constraint in Forest Planning, and Appendix B, page B-109 for a discussion on this subject.

Results: For the Toiyabe National Forest, with an uneven age class distribution, the 90% of LTSY requirement may not be appropriate. Version II FORPLAN is capable of determining LTSY, however a constraint on growth is not possible meaning we can not constrain the model for maintaining growth at 90% of LTSY.

ALTERNATIVE P VS. ALTERNATIVE P DEPARTURE FOR WILDLIFE

There is little to choose from between the alternative P timber cut and the departure run regarding impacts on wildlife. There are substantial acres of early (sapling pole) succession timber stands. These are important wildlife habitats and although the number of acres of sapling/pole habitat is not great there is no threat this habitat will be eliminated. Large amounts are scattered throughout the west. Old growth habitat, a generally more limited age class is greater in the departure run.

TABLE E-2 ALTERNATIVE P (Ten Year Period Total)
(NON-DEPARTURE RUN)

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)	6.9	6.9	6.9	6.9	6.9
Dispersed Rec (M RVDS)*	18076	20938	24178	24178	24178
Wilderness Rec (M RVDS)*	6299	6747	7185	7185	7185
Developed Rec (M RVDS)*	10970	11250	11690	12460	13150
Fishing (M WFUDS)*	3435	4102	4331	4603	4622
Hunting (M WFUDS)*	1788	2004	2139	2275	2347
Mgt. Indicator Species (M #)	297	308	319	319	319
Habitat Improvement (M Acres)	170	170	170	170	170
Livestock (M AUMS)	980	981	990	990	990
Wild Horse/Burro (M AUMS)	52	52	52	52	52
Fuelwood (MMCF)	6	6	6	6	6
Water (M Ac-Ft)	9495	9495	9495	9495	9495
Operating Plans (numbers)	2630	2630	2630	2630	2630
Discounted Benefits **	264	180	134	89	61
Discounted Costs **	50	34	23	15	11
Discounted Net Value **	214	146	111	74	50

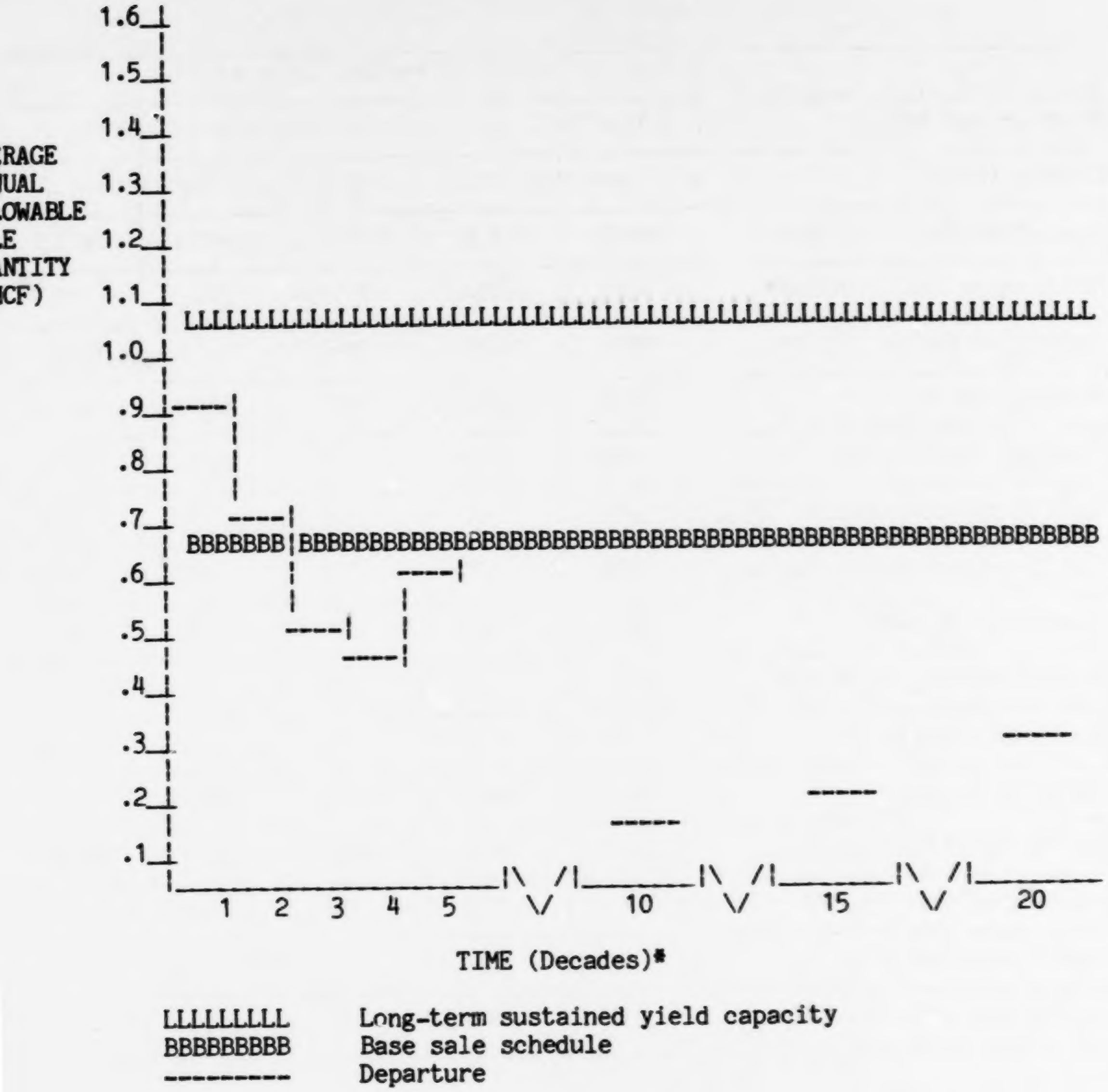
* Valued yield, not supply
** In millions of dollars (1978 dollars)

TABLE E-3 ALTERNATIVE P (Ten Year Period Total)
(DEPARTURE RUN)

Yield, Activity, Benefit, Cost or Net Value	Period (Decade)				
	1	2	3	4	5
Timber (MMCF)	9.4	7.0	5.3	4.6	6.2
Dispersed Rec (M RVDS)*	18080	20932	24173	24173	24173
Wilderness Rec (M RVDS)*	6305	6754	7193	7193	7193
Developed Rec (M RVDS)*	10970	11250	11690	12460	13150
Fishing (M WFUDS)*	3436	4102	4331	4604	4622
Hunting (M WFUDS)*	1789	2004	2139	2275	3347
Mgt. Indicator Species (#'s)	296	308	319	319	319
Habitat Improvement (acres)	170	170	170	170	170
Livestock (M AUMS)	980	981	990	990	990
Wild Horse/Burro (M AUMS)	52	52	52	52	52
Fuelwood (MMCF)	6	6	6	6	6
Water (M Ac-Ft)	9495	9495	9495	9495	9495
Operating Plans (numbers)	2630	2630	2630	2630	2630
Discounted Benefits **	264	179	134	89	61
Discounted Costs **	49	34	23	14	11
Discounted Net Value **	215	146	111	75	50

* Valued yield, not supply
** In millions of dollars (1978 dollars)

FIGURE E-1 DEPARTURE GRAPH



FORPLAN, the eight (8) period planning horizon consists of 5 -10 year (decade) riods, followed by 3 -50 year periods. During period 6, 7 and 8, FORPLAN displays harvest at the end of each 50 year period (100, 150 and 200 years).

APPENDIX F

RELATIONSHIP OF WILDERNESS/MINERAL ISSUE

Description - The basic resource conflict associated with wilderness designation is the potential impact on future mineral development. The following summary Table is designed to illustrate by roadless area, wilderness quality and benefit, mineral potential and benefit.

In order to construct this table the following planning assumptions were made:

> Wilderness Quality - This is a composite of the quality of a roadless area description in Appendix C. The wilderness quality described in Appendix C is based on consideration of Natural Integrity, solitude, primitive recreation, challenging experience, and special features.
>
> Wilderness Value - This value was calcultated in Forplan and is based on expected use described by RVD's (Recreation Visitor Days).
>
> Mineral Potential - The potential was identified as low, moderate, and high through a review of available geological studies and literature. Maps with the potential described are on file in the Supervisor's Office.
>
> Mineral Values - The following describes the methodology used to develop the mineral values.

Yearly Mineral Production on Toiyabe National Forest

The purpose of this research is to equate the total dollar value of mineral commodities produced on the Toiyabe National Forest to a "dollar value per acre" for the entire Forest. The "dollar value per acre" will be weighted by considering if the acres are rated as having "high, moderate, or low mineral potential" as used in the Toiyabe Land Management Plan and DEIS.

During the 1983 and 1984 period, mineral production on the Toiyabe National Forest came from the following listed mines. The production figures are estimated, based on published production figures or were gathered from personal contacts. By using these major producers, we are accounting for 90-95% of the total production off the Forest.

MINE	EST. YEARLY PRODUCTION	DOLLAR VALUE
Cyprus-Northumberland (1984)	Gold 35,000 oz @ $350/oz Silver 33,000 oz @ $9/oz	$12,250,000 $ 287,000
Borealis (1983)	Gold 70,000 oz @ #350/oz	$24,449,925
All Minerals & Standard Slag (1983, 1984)	Barite 100,000 tons @ $35/ton	$ 3,500,000
C-E Magnesite (1983, 1984)	Magnesite 300,000 tons @ $228/ton	$68,400,000

MINE	EST. YEARLY PRODUCTION	DOLLAR VALUE
Victorine Mine (1984)	Gold & Silver ore 95,000 tons/year @ $70/ton production costs	$ 6,650,000*
	TOTAL	$115,546,925

Cyprus-Northumberland, C-E Magnesite and the Victorine Mines are on patented lands within the National Forest. All these lands were previously public domain lands.

The Toiyabe Forest acreage is 3,170,446 acres. Dividing the total acreage into the total production would give a "dollar value per acre" of $36.45. This would be the yearly value with considerations given to whether the area has "high, moderate or low mineral potential." The probability of the occurence of an economic mineral deposit follows this classification:

PROBABILITY	MID VALUE	RATIO	FACTOR **
Low 0-40%	(20%)	1	(.33)
Moderate 40-80%	(60%)	3	(1.00)
High 80-100%	(90%)	4.5	(1.50)

In order to establish a base value we can consider the "moderate potential" areas to be representative of the "average" Toiyabe Forest lands and also to fairly represent the $36.45 "dollar value per acre." Assigning a relative potential rating base of one (1) to the moderate potential areas; the rating for low potential would be .33 and the rating for high potential areas would be 1.50. This rating base merely related the relative conomic mineral occurence probability between "low, moderate, and high" potential lands. If we assume modeate potential lands to have a "dollar value per acre" of $36.45 then low potential lands would have a "dollar value per acre" of $12.15 and high potential lands would have a "dollar value per acre" of $54.68. These numbers are far from absolute, but might be used to discuss the relative value of mineral resource lands.

In summary, based on a yearly production of $115,546,925, Toiyabe lands would have a relative value of:

MINERAL POTENTIAL	DOLLAR VALUE
Low	$12.15
Moderate	$36.45
High	$54.68

---

* This figure represents the basic operating cost to run the mine. This used since the company will not release actual production figures.

** Using moderate values as the base

Planning/Public Recommendations

Each roadless area on the Toiyabe has been evaluated for wilderness previously through either unit planning (1975-78) or through the RARE II process. Tables F-1 and F-2 describes the results of the respective studies.

Nevada State Concensus Meeting - The State of Nevada represented by the Division of State Lands sponsored two meetings of various interest groups with the hope of developing a concensus Wilderness Bill for the State of Nevada. The meetings were held in the spring of 1984. Both attempts to arrive at a concensus failed. Tables F-1 and F-2 represents the positions finally taken by the mineral and environmental interest groups.

Although there are 54 roadless areas on the Toiyabe in Nevada, the discussion at the meetings focused on the eight (8) areas listed below:

Hunter Creek
Carson Range
Excelsior
Toiyabe Range Peak
Southern Toiyabe (including Arc Dome)
Mt. Jefferson
Table Mountain
Mt. Charleston

Tables F-1 and F-2 summarize the wilderness, minerals, and surface resource values or opportunities and support or lack of support for wilderness experience by interest groups.

Table F-1 - Summary Description of Areas Considered by Interest Groups within Nevada

Roadless Area	Wilderness Quality	Wilderness Value	Mineral Potential	Mineral Value	Planning/Public Recommendation				Remarks and Resource Potential
					Unit Planning	Rare II	Concensus Meeting		
							Mining	Envir.	
Hunter Creek	Moderate	188.7	Low	104.7		NW	NW	Wilderness	Interest for wilderness by state environmental groups. Small area and would be difficult to manage as wilderness as boundaries do not follow topographic features. Opportunities to adjust the boundary is limited.
Carson Range	Low	556.2	Moderate	852.2		NW	NW	Wilderness	Interest for wilderness by state environmental groups. Management for wilderness would be difficult as the area is small and opportunities for boundary modification is limited, similar to Hunter Creek - a small area on the south has been identified by the proposed Galena Ski Area for addition to the development.
Excelsior	Mod/High	115.4	High	10248.9		Wilderness	NW	Wilderness	Estensive archeological resources, pinyon pine, and a large wildhorse population (Montgomery Pass Wildhorse Territory).
Toiyabe Range Peak	Mod/High	973.8	High	9697.9	NW		NW	Wilderness	Lahonton cutthroat trout are in the area and extensive livestock grazing mostly by cattle. Some sheep in the Northern Kingston. There are opportunities to improve vegetative condition through habitat improvement projects like burning.
Southern Toiyabe (not including Arc Dome)	Mod/High	1243.9	Mod/High	9910.9	NW		NW	Wilderness	This roadless areas originally included the Arc Dome. The environmentalists' support wilderness for a larger area which includes Arc Dome

Table F-1 - Summary Description of Areas Considered by Interest Groups within Nevada

Roadless Area	Wilderness Quality	Wilderness Value	Mineral Potential	Mineral Value	Planning/Public Recommendation				Remarks
					Unit Planning	Rare II	Concensus Meeting		
							Mining	Envir.	
Arc Dome	High	1843.9	Mod/High	7050.4	Wilderness Study	Wilderness	Further Planning	Wilderness	The miners supported further planning for the Arc Dome portion only or 94.4 M acres. There are numerous habitat improvement project opportunities in the roadless area south of Arc Dome. There are some mining claims within the "heart" of the Arc Dome.
Mt. Jefferson (37,000 ac)	High	291.0	Moderate	1370.5	NW		NW	Wilderness	Moderate to excellent opportunities to improve vegetative condition for livestock and wildlife through habitat improvement projects. There are opportunities to modify boundaries for a viable wilderness with minimum resource and mineral conflicts.
Mt. Jefferson Core Area (31,000 ac)	High	239.9	Low	376.7	NW		NW	Wilderness	
Table Mountain	Mod/High	2265.5	Moderate	9960.0	NW		NW	Wilderness	Excellent potential to continue vegetative and watershed improvements through prescribed burning, watershed stabilization projects, etc. Most of the mineral potential lies on the east side although there is an oil/gas potential on the NW corner.
Mt. Charleston	Mod/High	5629.8	Moderate	2289.5	NW		Wilderness	Wilderness	

Table F-2. Summary of Wilderness/Resource Values

Roadless Area	Wilderness Quality	Wilderness Value	Mineral Potential	Mineral Value	Planning/Public Recommendation		Concensus Meeting		Remarks
					Unit Planning	Rare II	Mining	Envir.	
Hoover Further Planning Area	High	2160.6	Moderate	4806.4		Further Planning	N/A	N/A	3 inventoried winter sports sites are within the roadless area.
Hoover Planning Area	High	4205.0	Low	973.1		Wilderness	N/A	N/A	
Carson Iceberg Planning Area	High	55.6	Moderate	577.6		Wilderness	N/A	N/A	
Sweetwater Further Planning Area	Low/Mod.	4882.2	High	6047.6		Further Planning	No comment	No comment	The Nevada portion was not considered for possible wilderness during the Nevada wilderness concensus meetings. Significant mineral values in the area.
Long	High	252.8	High	1073.3		NW	No comment	No comment	
Wellington Hills	Low/Mod	431.5	Moderate	1208.6		NW	No comment	No comment	
Desert Creek Peak	Low/Mod	236.9	Moderate	653.8		NW	No comment	No comment	
Lobdell	Low/Mod	608.4	High	2587.0		NW	No comment	No comment	
Wiley	Moderate	130.4	High	558.0		NW	No comment	No comment	
Bald Mountain	Moderate	36.3	Moderate	644.1		NW	No comment	No comment	Some interest for wilderness by state environmental organizations
Excelsior	Mod/High	115.4	High	10248.9		Wilderness	NW	Wilderness	
Hunter Creek	Moderate	190.1	Low	104.7		NW	NW	Wilderness	Interest for wilderness by state environmental groups.
Carson Range	Low	562.9	Moderate	852.2		NW	NW	Wilderness	Interest for wilderness by state environmental groups The Galena ski resort is proposing expansion of the ski are in this area.

Table F-2 Summary of Wilderness/Resource Values

Roadless Area	Wilderness Quality	Wilderness Value	Mineral Potential	Mineral Value	Planning/Public Recommendation				Remarks
					Unit Planning	Rare II	Concensus Meeting Mining	Concensus Meeting Envir.	
Sugar Loaf	Low	188.5	High	793.0		NW	No comment	No comment	
Buller	Moderate	198.4	High	841.5		NW	No comment	No comment	
Mt. Hicks	Moderate	291.9	Moderate	817.6		NW	No comment	No comment	
Long Valley	Moderate	1014.4	High	4303.6		NW	No comment	No comment	Interest for wilderness by state environmental groups.
Marble Falls	Low	12.1	High	928.5	NW		No comment	No comment	
Sherman Peak	Low	8.7	High	705.2	NW		No comment	No comment	
Paradise Peak	Low	24.2	High	1989.8	NW		No comment	No comment	
Elkhorn	Low	13.8	Moderate	391.1	NW		No comment	No comment	
North Shoneshone	Moderate	62.8	High	3354.2	NW		No comment	No comment	
South Shoneshone	Moderate	55.7	High	2221.7	NW		No comment	No comment	
Mt. Ardivy	Low/Mod	238.4	Moderate	2200.3	NW		No comment	No comment	Some interest for wilderness by state environmental organizations.
Willow Creek	Low	36.7	High	628.7	NW		No comment	No comment	
Bob Scott	Low/Mod	50.5	High	903.8	NW		No comment	No comment	
Bade Creek	Moderate	58.9	Moderate	565.4	NW		No comment	No comment	
Bunker Hill	Moderate	236.9	Moderate	1915.7	NW		No comment	No comment	Interest for wilderness by state environmental organization

Talbe F-2 Summary of Wilderness/Resource Values

Roadless Area	Wilderness Quality	Wilderness Value	Mineral Potential	Mineral Value	Planning/Public Recommendation Unit Planning	Rare II	Concensus Meeting Mining	Concensus Meeting Envir.	Remarks
Toiyabe Range Peak	Mod/High	973.8	High	9693.9	NW		NW	Wilderness	
Marysville Creek	Moderate	91.4	Moderate	492.3	NW				
Southern Toiyabe (not including Arc Dome	High	1243.9	Moderate/High	9910.9	Wilderness Study	Wilderness	Further Planning	Wilderness	Miners support further planning for the Arc Dome portion only. Moderate to high potential for range and wildlife habitat improvement projects in the south.
Arc Dome	High	1843.9	Moderate/High	7050.4	Wilderness Study	Wilderness	Further Planning	Wilderness	Miners support further planning for Arc Dome.
Bank Spring	Low	163.8	Moderate	1015.8	NW		No comment	No comment	
Toquima Cave	Low/Mod	51.9	High	3812.8	NW		No comment	No comment	
Clipper Gap	Low/Mod	12.1	High	937.8	NW		No comment	No comment	
Sams Canyon	Moderate	313.0	High	975.9	NW		No comment	No comment	
Mud Springs-Boulder	Moderate	178.2	High	5121.7	NW		No comment	No comment	
Iron Springs-Wildcat Peak	Moderate	66.2	Moderate	1512.3	NW		No comment	No comment	
North Moores Creek	Low	50.6	High	1130.7	NW		No comment	No comment	
Mt. Jefferson (37,000 ac)	High	291.0	Moderate	1370.5	NW		NW	Wilderness	Moderate to excellent opportunities to improve vegetative condition for livestock and wildlife through habitat improvement projects.
Mt. Jefferson Core Area (31,000 ac)	High	239.9	Low	376.7	NW		NW	Wilderness	
Mariposa	Low/Mod	66.2	High	815.3	NW		No comment	No comment	

Table F-2 Summary of Wilderness/Resource Values

Roadless Area	Wilderness Quality	Wilderness Value	Mineral Potential	Mineral Value	Planning/Public Recommendation				Remarks
					Unit Planning	Rare II	Concensus Meeting		
							Mining	Envir.	
Silver Creek	Moderate	214.1	High	2544.7	NW		No comment	No comment	
Sagehen	Low	71.5	High	808.1	NW		No comment	No comment	
Fitzpatric Springs	Low	104.1	High	1230.5	NW		No comment	No comment	Interest in wilderness by state environmental groups
Antelope Peak	Moderate	73.5	Moderate	3665.2	NW		No comment	No comment	
Brock Canyon	Moderate	32.7	Moderate	1632.8	NW		No comment	No comment	
Bald Mountain (Central NV)	Moderate	36.3	Moderate	1402.2	NW		No comment	No comment	
Horse Heaven	Mod/High	212.6	Low	2024.3	NW		No comment	No comment	Area strongly dissected by "cherry stem" in roads
Table Mountain	Mod/High	2265.5	Moderate	9960.0	NW		NW	Wilderness	Excellent potential for continuing vegetative improvement for livestock/wildlife through prescribed burning, watershed treatment, etc.
Rock Canyon	Moderate	245.4	Low	483.5	NW		No comment	No comment	
Big White Sage	Low	35.7	Moderate	754.5	NW		No comment	No comment	
Big Ten	Low	15.7	Moderate	520.6	NW		No comment	No comment	
Georges Canyon	Moderate	153.8	Moderate	4346.0	NW		No comment	No comment	Interest in wilderness by state environmental groups
Antelope	Low	10.4	Moderate	344.5	NW		No comment	No comment	
Saulsbury	Low	33.2	Moderate	1213.4	NW		No comment	No comment	

Table F-2 Summary of Wilderness/Resource Values

Roadless Area	Wilderness Quality	Wilderness Value	Mineral Potential	Mineral Value	Planning/Public Recommendation				Remarks
					Unit Planning	Rare II	Concensus Meeting		
							Mining	Envir.	
Warm Springs	Low	46.7	Moderate	1687.1	NW		No comment	No comment	
Red Peak	Low	8.6	Moderate	303.7	NW		No comment	No comment	
Mt. Charleston	Mod/High	5629.8	Moderate	2289.5	NW		Wilderness	Wilderness	

Table F-3 Wilderness Proposal - M acres

CALIFORNIA		Max Wilderness Benchmark	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H	Min Wilderness Benchmark
Hoover Further Planning Area	2/	54132.	Further Plan		54.1				54.1	54.1		0
Hoover Planning Area	1/	49272.	Further Plan		49.2	49.2	49.2	49.2	49.2	49.2	49.2	0
Carson Iceberg Planning Area	1/	9680.	Further Plan		9.7	9.7		4.9	9.7	9.7		0
Other Roadless Areas in California	3/	107,283										0

CALIFORNIA & NEVADA		Max Wilderness Benchmark	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H	Min Wilderness Benchmark
Sweetwater Further Planning Area CA-40000 ac NV-8700 ac	2/ & 4/	58112.	Further Plan		68.1				68.1	68.1		
Long CA-3388 ac NV-8700 ac	3/	12088.					8.7		8.7			

CALIFORNIA WILDERNESS ACT OF 1984

1/ - Congressional Study Area (CWA)
2/ - Further Planning (CWA)
3/ - Non-Wilderness (CWP)
4/ - Further Planning (RARE II)
5/ - Leavitt Lake Area

Table F-3 Wilderness Proposals - M acres

NEVADA

	Max Wilderness Benchmark	Alt A	Alt B	Alt C	Alt D	Alt E	Alt P	Alt F	Alt G	Alt H	Min Wilderness Benchmark
Wellington Hills	20618.							20.6			0
Desert Creek Peak	11414.							11.4			0
Lobdell	29071.							29.0			0
Wiley	6285.							6.2			0
Bald Mountain	69279.			69.2				69.2	69.2		0
Excelsior	115429.	115.4		115.4	115.4	115.4		115.4	115.4		0
Hunter Creek	5300.			5.3				5.3	5.3	5.3	0
Carson Range	14538.			14.5				14.5	14.5		0
Sugar Loaf	8932.							8.9			0
Buller	9478.							9.4			0
Mt. Hicks	13948.							13.9			0
Long Valley	48469.			48.4				48.4	48.4		0

Table F-3 Wilderness Proposal - M acres

	Max Wilderness Benchmark	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. P	Alt. F	Alt. G	Alt. H	Min Wilderness Benchmark
Marble Falls	10375.							10.4			0
Sherman Peak	7880.							7.8			0
Paradise	22235.							22.2			0
Elkhorn	6555.							6.6			0
North Shoshone	37480.							37.5			0
South Shoshone	24825.							24.8			0
Mt. Ardivey	36875.			36.8	36.8			36.8	36.8		0
Willow Creek	7025.							7.0			0
Bob Scott	10100.							10.1			0
Bade Creek	9475.							9.4			0
Bunker Hill	32105.			32.1	32.1			32.1	32.1		0
Toiyabe Range Peak	108320.			108.3	108.3			108.3	108.3		0
Marysville Creek	8260.							8.3			0

Table F-3 Wilderness Proposals - M acres

NEVADA	Max Wilderness Benchmark	Alt A	Alt B	Alt C	Alt D	Alt E	Alt P	Alt F	Alt G	Alt H	Min Wilderness Benchmark
Southern Toiyabe (Arc Dome)	227115.	94.4		94.4		94.4	94.4	227.1	227.1		0
Bank Spring	17024.							17.0			0
Toquima Cave	42605.							42.6			0
Clipper Gap	10480.							10.5			0
Sams Canyon	10905.							10.9			0
Mud Springs-Boulder	25345.							25.3			0
Iron Springs-Wildcat Peak	57230.							57.2			0
North Moores Creek	12635.							12.6			0
Mt. Jefferson	68570.			68.6	68.6		31.0	68.6	68.6		0
Mariposa	9110.							9.1			0
Silver Creek	28435.							28.4			0
Sage Hen	9030.							9.0			0
Fitzpatrick Spring	13750.							13.7			0

Table F-3 Wilderness Proposals - M acres

	Max Wilderness	Alt A	Alt B	Alt C	Alt D	Alt E	Alt P	Alt F	Alt G	Alt H	Min Wilderness
Antelope Peak	61425.			61.4	61.4			61.4	61.4		0
Brock Canyon	27365.							27.4			0
Bald Mountain (Central Nevada)	23500.							23.5			0
Horse Heaven	101740.							101.7	101.7		0
Table Mountain	166920.			166.9				166.9	166.9		0
Rock Canyon	24265.							24.3			0
Big White Sage	12265.							12.3			0
Big Ten	8725.							8.7			0
Georges Canyon	72835.			72.8	72.8			72.8	72.8		0
Antelope	5775.							5.8			0
Saulsbury	20335.							20.3			0
Warm Springs	28275.							28.3			0
Red Peak	5090.							5.1			0
Mt. Charleston	38370.			38.4	38.4	38.4	32.0	38.4	38.4	38.4	0
Total acres	2,102,811	209.8	0	1113.6	592.7	306.1	211.5	1922.2	1348.0	92.4	0

Table F-4 Present Net Value and Priced Outputs for Alternatives
(1978 Dollars Inflated to 1/1/82)
Figures Shown in MM$
Discount Rate is 4%
(In Order of Decreasing PNV)

				PVB by Resources						PVC by Major Cost Categories								
BENCHMARKS	PNV	PVC	PVB	Rec.	Wilder	Fish & Widlf	Grazing	Timber 1/	Other *	S&W	Minerals	Rec.	Wilder	Fish& Widlf	Grazing	Timber 1/	Roads	Other *
Min Level	274.2	49.2	323.7	127.5	231.2	172.9	0.0	0.0	39.3	1.6	4.0	4.3	1.3	1.7	0.3	0.9	0.0	35.4
PNV	1109.0	152.1	1,261.1	269.2	198.5	402.2	35.5	2.0	234.7	5.1	9.8	14.2	4.2	4.4	9.7	4.5	16.7	83.5
ALTERNATIVES																		
H	1109.0	152.1	1,261.1	269.2	198.5	402.2	35.5	2.0	234.7	5.1	9.8	14.2	4.2	4.4	9.7	4.5	16.7	83.5
D	963.7	183.1	1,146.8	299.1	148.8	355.0	37.4	17.1	195.4	4.8	9.9	24.9	2.3	4.3	10.4	12.7	28.7	85.1
B	946.9	204.2	1,150.1	313.8	23.3	320.8	37.7	21.2	398.3	5.8	14.9	34.7	1.3	5.8	11.3	16.6	32.9	80.9
P	913.8	174.7	1,087.6	287.9	149.9	346.9	36.7	10.0	135.2	5.9	12.5	30.4	2.1	4.9	10.9	8.9	16.3	82.8
C	881.1	146.8	1,027.8	240.7	234.0	359.3	35.3	5.4	103.1	5.6	9.9	12.9	3.6	4.8	9.8	5.5	13.0	81.7
F	865.8	109.8	975.7	218.0	267.3	346.2	35.5	1.8	106.9	3.9	9.8	10.7	5.0	3.5	9.3	4.3	2.0	61.3
E	756.5	98.9	855.4	205.2	181.2	293.6	36.3	2.5	50.6	2.3	9.9	13.5	2.2	2.9	9.0	4.7	2.0	52.4
G	743.4	181.1	924.6	220.8	245.1	267.5	38.5	17.3	89.3	2.5	9.8	25.7	4.0	2.4	11.0	13.5	29.7	82.5
A	624.2	129.8	753.0	216.0	102.5	202.6	37.4	12.9	66.6	2.6	9.8	14.9	1.9	2.9	9.6	10.3	12.1	71.0

1/ Includes sawtimber, Christmas trees, pinyon nuts, posts & poles, and fuelwood

PNV - Present Net Value
PVC - Present Value Costs
PVB - Present Value Benefit

APPENDIX G

Appendix G

Sensitivity Analysis of $ 8.13 per Developed Recreation RVD vs $ 3.00 per Developed Recreation RVD.

This appendix shows a comparison of using $ 3.00/RVD for developed recreation (1980 RPA value) vs. using $ 8.13/RVD (1985 RPA value). Developed recreation is a major resource for the Toiyabe National Forest along the Sierra Front and Las Vegas. Estimations made by the Forest (see Chapter III, Draft Environment Impact Statement (DEIS)) shows that within the first decade, many of the developed sites will exceed their advisable theoretical capacity level.

When the Present Net Value (PNV) benchmark (also alternative H in the DEIS) was calculated in DE-FORPLAN using a $ 3.00/RVD for developed recreation, little or no construction/reconstruction was planned. This was due to the value of that construction (total RVD output for the project times the $ 3.00 value/RVD) less the cost (total construction cost plus annual operating costs) being less than zero. Rerunning the PNV with all costs and values being constant except using $ 8.13/RVD for developed recreation resulted in a marked increased in construction/reconstruction. (See Appendix B for a detailed description of how the PNV is calculated with DE-FORPLAN).

Table G-1 shows by periods, the output of increased People At One Time (PAOT) for developed recreation, the total RVD output (both existing and new sites) of developed recreation, and the respective value of $3.00/RVD and $ 8.13/RVD. Table G-2 is a comparison of construction/reconstruction projects by year of a $ 3.00/RVD and $ 8.13/RVD.

TABLE G-1

	$ 3.00 per RVD			$ 8.13 per RVD		
PERIOD	PAOT	M RVD	VALUE	PAOT	M RVD	VALUE
1	140	909	2,727	1,525	909	7,492
2		719	2,157	1,260	1,056	8,585
3	140	492	1,476	620	1,124	9,138
4	160	513	1,539	850	1,233	10,024
5		513	1,539	880	1,331	10,821

TABLE G-2

District	DEVELOPED RECREATION PROJECTS	$ 3.00 RVD PNV	$ 8.13 RVD PNV
	FIRST DECADE		
1	Faith Valley CG, constr.		
2	Lake CG, constr.		x
2	Boulder CG, constr.		x
1	Hope Valley CG, rehab.		
2	Lower Twin Lake CG, rehab.		x
2	Honeymoon CG, rehab.		x
2	Trumbull Lake CG water system, rehab.		x
2	Sawmill CG, rehab.		x
2	Bridgeport VIS improvement		x
3	Kingston CG water system, rehab.	x	
3	Big Creek CG water system, rehab.	x	x
	SECOND DECADE		
1	Twin Creeks complex, constr.		
2	Mono Village complex, constr.		x
5	Kyle Canyon VIS site, constr.		x
5	Kyle CG, rehab.		
5	McWilliams CG, rehab.		
5	Hilltop CG, rehab.		
5	Dolomite CG, rehab.		
	THIRD DECADE		
1	Centerville CG, constr.		
2	Crags CG, constr.		x
3	Bob Scott CG, rehab.		
3	Kingston CG, rehab.	x	x
3	Big Creek CG, rehab.	x	x
4	Barley Creek CG, constr.		
4	Pine Creek CG, rehab.		
	FOURTH DECADE		
1	Forestdale CG, constr.		
2	Cloudburst CG, constr.		x
3	Bade Flat CG, constr.		
3	Upper Big Creek CG, constr.	x	x
4	Shipley CG, constr.		
4	Mosquito Creek CG, constr.	x	x
2	Eagle Peak Ski Area, engr. support		
5	Portals CG, partial constr.		x
3	Columbine CG, constr.		x
3	Stoneberger CG, constr.		x
3	San Juan CG, constr.		

District	DEVELOPED RECREATION PROJECTS FIFTH DECADE	$ 3.00 RVD PNV	$ 8.13 RVD PNV
1	Dog Valley CG, rehab.		
1	Lookout CG, rehab.		
1	Wolf Creek CG, constr.		
2	Castle Rock CG, constr.		x
4	Jefferson Interpretive Site, constr.		
5	Tres Piedras CG, partial constr.		x

*U.S. GOVERNMENT PRINTING OFFICE: 1985-578:610:20001